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# AGRICULTURAL HISTORY

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# IN PRAISE OF THE FINNISH BACKWOODS FARMER

JOHN ILMARI KOLEHMAINEN

*Heidelberg College*

One of the impressive accomplishments of the Finnish Americans has been the transformation of the cutover wreckage left by the lumber barons in northern Michigan, Wisconsin, and Minnesota into life-sustaining 40- and 80-acre farms.[1] Where once stood "a tiny, rough-lumber, tar-papered shanty," there is now a neat, substantial frame dwelling; sunlit fields and wind-touched meadows and garden plots of turnips and potatoes have replaced "a desert of stumps and tree tops and brush."[2]

This achievement has elicited generous praise. The Finn, testified the agricultural agent of Houghton County, Michigan, "took over that cutover land when nobody else in the world had the courage to tackle the proposition.... He turned that worthless stumpage into mighty valuable farm land."[3] A Wisconsin writer, returning from a visit among the Finnish settlers of Bayfield County, stressed "their adaptability to pioneer conditions. They are superior in intelligence, physical strength, patience and persistence. They are self-contained and somewhat apart from the rest, but they are the makers of history as it will be written of this new empire."[4] Minnesota's able historian, Grace Lee Nute, has expressed the view that "probably no other group could take over stump land, perhaps also burned over, and make successful farming country of it."[5] Extravagant was the encomium bestowed by a book reviewer in the *New York Times:* "In a land of charred stumps, the Finns are creating a paradise."[6]

Victory over the wasteland was not easily won. Every opened furrow, glistening in the sun with sweat and tears, was eloquent evidence that "in this life, bread does not come through play." Work days were long, providing no time for the settler to "observe the rising or the setting of the sun. He noted only that the days were too short in his kingdom."[7] The ugly countenances of stones and boulders leered from beneath the mulch. Imperishable pine stumps sweated resin in the heat of summer, as though shedding tears at the graves of the fallen giants. The newcomer confidently tested his sharp ax-blade against the nearest stump. "The wound grinned at him like a resinous mouth. He swung the ax a second time, and he now felt how deep the roots really were. The earth shook, but the pitch-filled tentacles clung fast to the sand and the stones. He swung again, and again, in a frenzy, but the stump won the battle—it did not budge." After hours of maddening toil, the intruder "realized for the first time that his quest for fortune in the wilderness would not be as easy as he had imagined."[8] Like Willa Cather's pioneer, he came face to face with the truth that this "land wanted to be let alone, to preserve its own fierce strength, its peculiar savage kind of beauty, its uninterrupted mournfulness."[9]

Such a formidable and hostile foe merited a worthy antagonist, and the wilderness found its match in the Finnish immigrants. "They seem to thrive," reported a writer in 1912, "where the hardships are most severe...."[10]

What assets, what attributes of body and mind did the Finn possess that made triumph possible, more often than not, in this mighty, desperate, silent struggle?[11]

[1] This article is an adaptation of the author's address at the Finnish Pioneer Day celebration in St. Paul, Minn., on Aug. 21, 1949.

[2] James K. Jamison, *This Ontonagon Country: The Story of an American Frontier* (Ontonagon, Mich., 1939), 248.

[3] *Mining Gazette* (Houghton, Mich.), Nov. 2, 1919.

[4] *Wisconsin Agriculturist*, Feb. 18, 1915.

[5] Grace Lee Nute, *Lake Superior* (Indianapolis, 1944), 258.

[6] *New York Times*, Aug. 27, 1944.

[7] K. Rissanen, *Amerikan suomalaisia* (Superior, Wis., 1924), 94.

[8] *Ibid.*, 95.

[9] Willa Cather, *O Pioneers* (Boston, 1941), 15.

[10] LeRoy Hodges, "Immigrant Life in the Ore Region of Northern Minnesota," *Survey*, 28: 709 (1912).

[11] There were, of course, defeats as well as victories in the submarginal areas of the Middle West. As K. Rissanen vividly reveals in his story, *A Prisoner on the Farm*, some Finns, burdened by indebtedness, ill health, and ignorance of agricultural techniques, were

First of all, he generally brought into the fray arms of steel, and a body which, although not always Gargantuan in outside dimensions, was wiry, resilient like the juniper tree, driven by a well-nigh inexhaustible fund of power. The Finns were, in the words of one of their number, "healthy, stiff-necked, endowed with the strength of a bear and the endurance of a mule."[12]

A second, highly important, advantage was found in the Finns' conception of their unique nature and their mission in life. To them, a wilderness blazer's role was no fortuitous adventure, no passing episode, but a charge pregnant with meaning and inner satisfaction. Many immigrants believed that God had commanded men to seek their happiness from the soil, and confidingly they read the reassuring words: "When God wanted to make man completely happy, He put him on a piece of land."[13] It was widely held, moreover, that the special obligation of the Finns, in whom it was said dwelled an irresistible "land-spirit," was to conquer the wasteland, to carve "little holdings out of forest and rock-strewn soil."[14] The Finnish spirit was likened to the "spirit of the backwoods. Where there was uninhabited wilderness, there one found the Finns. It enticed and attracted them. Its silent call could not be refused, not even in America."[15]

A backwoods' existence meant, in addition, the opportunity to satisfy the old, deep-rooted craving of the impoverished landless to own land. "The Finn is singular," affirmed one of them, "in that sooner or later he is conquered by an unreasoning, mad passion to own his own place, which means that he has to get a small plot of land, on which he can stand legs apart and say: 'This is mine and others have no right to trespass here.' He has to have something, if only a birch tree, a spruce or a pine, a goat or a cow, around which he can fling his arms and exclaim: 'This no one, not even the richest lord, can take away from me. For this is mine!' "[16] "A house of his own, thus, was the dream of every Finn. A cabin in a clearing out in the wilderness was the end product of heavy labor and great personal denials. Every cut of the ax in its logs was a token of energy and the will to triumph over hostile elements."[17]

The Finn's contentment with his 40 acres grew as he reflected upon his past experiences as a wage earner. He called to mind the awful dangers of mining, and the portrait of the mistreated, castoff miner still haunted him:

> For many a year he'd toiled in the mine,
> And for wages had pocketed
> An ailing body besides his bread,
> A caved-in chest and a crooked spine.[18]

He remembered the deplorable conditions in the logging camp:

> A wretched home, this cheerless camp;
> And "finer people" sneer, make cracks:
> "You ruffians, bums,
> bearded lumberjacks!"
> Our wages are the rags we wear,
> Our scraps of food no one digests.
> Our beds are bunks
> And fleas our only guests.[19]

Factory and railroad work had been wearisome and difficult. The rewards of fishing had been "lashing gales, blizzards, bitter cold, disaster," and sometimes foam-crested wreaths.[20]

In happy contrast, the life of a backwoods farmer, hard though it was in tangled brush and mucky swamp, promised independence, security, and the right to eat the fruits of one's labor. Across the borders of the tiny, newly-acquired realm rang the exultant song:

> Here I am lord and give commands
> Free from the bosses' bad intent.
> My toil's rewarded by my lands,
> Which once to the extortioner went.[21]

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compelled to return, thoroughly disillusioned, to wage employment, saying: "The law of the frontier is like that. The weaker will be defeated. We have been defeated." *Amerikan suomalaisia*, 103.

[12] *Toveri kymmenvuotias 1907–1917 muistojulkaisu* (Astoria, Oregon, 1917), 67.

[13] J. H. Jasberg, *Maalaiselämän edut* (Hancock, Mich., 1913), 1.

[14] Juhani Aho, "Pioneers," in Arthur Reade, *Finland and the Finns* (New York, 1915), 148.

[15] Samuli Vire, "Kyrö," in *Suomen Sosialidemokraatti*, July 31, 1947.

[16] *Helsingin Sanomat*, Mar. 27, 1949.

[17] H. Aho, ed., *Picturesque Finland* (Helsinki, 1948), 12.

[18] *Pelto ja Koti*, 5: 229 (1916), reprinted from *Vappu 1915*.

[19] *Palkkaorjain lauluja* (Duluth, Minn., 1925), 38–39.

[20] Clay Perry, "Herring Are Silli," *Collier's Weekly*, Feb. 17, 1945.

[21] M. Rutanen, "Uutisviljelijän laulu," *Pelto ja Koti*, 8: 9 (1919).

How sustaining in time of adversity and hardship was this view of life, which embodied the will of God, the fulfillment of the Finnish "land-spirit," the realization of landownership, and freedom from the evils of wage employment. "Where there is land, there is hope."[22] That was the living motto of the Finnish pioneer.

A third asset was the willingness to sacrifice present comforts for the promise of future rewards. As a rule, the Finns "worked harder, saved more, and lived with fewer of the material comforts" than their American neighbors,[23] who, as the immigrants observed, frequently "had too many ornaments in the front room . . . too many paintings in the guest room."[24] The Spartan standard of the immigrant demanded: "Be content with the sternest simplicity. Deny every pleasure and luxury. Avoid day dreams and high hopes."[25] Often enough, Finnish thrift was regarded by the outsider as an excellent trait. "If the Finn's frugality would be contagious," complimented one, "it would become one of our most valuable national assets."[26] Sometimes, be it admitted, self-denial was carried to extremes, the immigrants emulating "the ways of the bees and the ants too earnestly."[27]

Let no man underestimate the significance of the fourth asset: the Finnish farm wife. "Never attempt to sell a farm or cutover farm land to a man whose wife objects to moving to the country,"[28] was the sound advice given to the American Railway Development Association in 1922 by the foremost Finnish-American colonizer. In truth, the wilderness would not have been tamed without the pioneer woman, working on an 8-hour schedule: 8 hours in the morning, 8 hours in the afternoon and evening. Three quotations serve to reveal the extent of her activity. "It was back-breaking, grubbing, lugging, tugging work with stumps and brush and roots so that her body ached with weariness, sheer and utter,"[29] was a native American's picture of the immigrant woman. A second writer pointed out that the hardy, yet soft-spoken, Martha "plowed and sowed, hoed and harrowed, dug ditches, cut hay, and gathered the harvest better than her spouse."[30] "Farming and cattle-raising," read a third description, "were left in the hands of the wife, who in addition acted as the dairymaid, stableman, veterinarian, doctor, bookkeeper, tailor, shoemaker, carpenter, midwife, trapper, poultry specialist, and so on."[31] With justification did the Finnish farm wife ask: "When did I begin my work today? At what hour of the night did I find rest? What is my recreation?"[32] And surely she had every right to bite her tongue in suppressed anger when conceited or blind males described wilderness breaking as a "man's job."

The Finn's fifth asset was *sisu*, a quality that defies simple translation, that is a rare combination of courage, persistence, doggedness, the ability to take the bad with the good, the unexpected with the calculated. The vulgar Americanism "guts" is part of it, as is the saying, "The Finn doesn't know enough to quit." Finland's national poet, Johan Ludwig Runeberg, has caught this fine trait in the net of language in his epic, *The Peasant Paavo*. The story is well-known. High among the moors of Saarijärvi stood Paavo's frosty farm. Devoutly he prayed, diligently he toiled, and eked out a scanty livelihood for his wife and children. But hard times came. Pelting rains and autumn frosts stole the crops.

Paavo's wife now tore her hair, lamenting:
"Paavo, Paavo, thou ill-fated husband!
Seize thy staff, the Lord hath us forsaken;
Begging bread is hard, but worse is dying!"
Paavo grasped his spouse's hand and uttered:
"The Lord is trying us, and not forsaking.
Thou must mix with bark our bread together;
Ditches I will dig, in double numbers;
From the Lord will I expect a blessing."
So she mixed with bark their bread together;
Ditches dug he then in double numbers;
Sold his flocks, and buying grain he sowed it.

[22] Eugene Van Cleef, "The Finnish Farmer of Northeastern Minnesota," *Northland Farmer and Dairyman*, September 1917.

[23] J. H. Jasberg, My Ideas and Practice in Colonization Work, manuscript copy of paper read at Denver, Colo., in 1922, at the annual meeting of the American Railway Development Association, in the archives of Suomi College, Hancock, Mich.

[24] *Pohjan Tähti* (Fitchburg, Mass.), June 11, 1902. See also *Amerikan Suometar* (Hancock, Mich.), May 7, 1902.

[25] J. Nelson, "Farmeille aikoville ja farmeilla asuville," *Koti-Home* (1922), 40–42.

[26] L. M. Geismar, "The Finn as a Farmer and as a Citizen," *Mining Gazette*, Nov. 5, 1919.

[27] Angus Murdoch, *Boom Copper: The Story of the First U. S. Mining Boom* (New York, 1943), 206–207.

[28] Jasberg, My Ideas and Practice. . . .

[29] Jamison, *This Ontonagon Country*, 249.

[30] *Aura*, 6: 4 (1919).

[31] *Cooperative Pyramid Builder*, 2: 68–69 (1927).

[32] *Pelto ja Koti*, 9: 310 (1920).

Springtime came, and from the sprouting corn-field
Nothing floated off with melting snow-drifts;
Summer came, and now the pelting showers
Beat the ears to earth—just half the harvest;
Autumn came—the frost took the remainder.
Paavo's wife then beat her breast, lamenting:
"Paavo, Paavo, thou ill-fated husband!
Let us die, the Lord hath us forsaken!
Death is hard, but ten times worse is living!"
Paavo grasped his spouse's hand and uttered:
"The Lord is trying us, and not forsaking.
Twice as much of bark thou must be mixing
With the bread; I'll dig as many ditches.
From the Lord do I expect a blessing."
Twice as much of bark the wife now mixed
With the bread; he dug as many ditches;
Sold his cows, and buying corn he sowed it.
Springtime came, and from the sprouting corn-field
Nothing floated off with melting snow-drifts;
Summer came, and now the pelting showers
Beat no ears to earth in ripening corn-field;
Autumn came—the frost, no more destroying,
Left the golden crops to greet the reaper.
Peasant Paavo bowed the knee, and uttered:
"The Lord hath tried us only, not forsaken."
And his wife knelt down, and murmured with him:
"The Lord hath tried us only, not forsaken."
And with joy spoke she unto her husband:
"Paavo, Paavo, seize thy scythe, rejoicing;
It is time to live a life of gladness,
It is time to leave the bark forever,
And to make our bread of pure corn only."
Paavo grasped his spouse's hand and uttered:
"O Woman, no one bears his trials so calmly
As the man who ne'er forsakes his brother;
Twice as much of bark with bread mix thou.
For frost-bitten stands our neighbor's corn-field."[33]

"A courage and a hardihood almost heroic,"[34] an abiding faith in the rural way of life, a patient, plodding wife, and stern austerity—these have been the essential ingredients for success in the cutover regions of the Middle West. Without them "the wilderness would not have been cultivated, and the foreposts of civilization would not have been planted in the midst of the forest."[35]

[33] *Suomen kansalliskirjallisuus*, 9: 50–52 (Helsinki, 1941).

[34] Jamison, *This Ontonagon Country*, 249.

[35] Aho, "Pioneers," in Reade, *Finland and the Finns*, 150.

# THE CONCEPT AND DETERMINATION OF PREVAILING WAGES IN AGRICULTURE DURING WORLD WAR II

SAMUEL LISS

*Farmers Home Administration, United States Department of Agriculture*

As the prevailing wage began to be viewed, particularly during the depression of the 1930s, as possessing the virtues of a minimum wage (protecting the wages of the lowest-paid workers, preventing the undermining of the "plane of fair wages," preserving a given level of competition, and spreading purchasing power in the interest of economic recovery or stability), it received recognition among economists and public officials as a standard of wage regulation.[1] Its acceptance as a basic minimum largely rested on the assumption that a wage which is currently predominant is a fair and just remuneration for work performed.

Accordingly, under certain conditions and in certain employments, governmental authorities in the United States have found it necessary and useful to adopt the prevailing rate as a wage norm. As a direct employer, the Federal Government (for example, in Navy Yards, the Bureau of Engraving and Printing, the Government Printing Office, etc.) has traditionally followed the practice of paying the going scales for similar or comparable work performed and paid for by private employers in a given locality. The Tennessee Valley Authority Act of 1933 specifically provided that in employing laborers and mechanics in its construction work, the Authority should not pay less than prevailing wages for similar work in the vicinity of employ-

[1] The author is an agricultural economist with the Farmers Home Administration, U. S. Department of Agriculture. During the early years of the war, he was in charge of reviewing the prevailing wage findings for various farm operations reported to the Secretary of Agriculture by State agricultural wage boards established under the Farm Labor Transportation Program of the Department.—*Editor*.

ment. As an indirect employer, the Federal Government has used the contract for work performed for it by private contractors as a vehicle for regulating wages based on the prevailing wage concept. Thus under the Bacon-Davis Act of 1931 responsibility was recognized for maintaining prevailing wage standards in connection with privately contracted public building and other construction projects. In 1936, with the enactment of the Walsh-Healey bill, the scope of this responsibility spread to employees engaged in the manufacture of commodities purchased by the Government.[2]

Until World War II, agriculture by and large had not been one of the industries in which the prevailing wage or any other wage standard was used in connection with wage making.[3] The adoption of the prevailing wage concept as a wage norm with respect to farm occupations during World War II, marked, therefore, a departure from its previous patterns of application. The purpose of this article is to describe the conceptual character of the prevailing wage standard in this novel environment and to pose and discuss the problems encountered in its application to an industry in which the wage structure can hardly be said to be tailored to standardization, uniformity, simplicity, or stability.

## THE BACKGROUND

It became evident, as the war transformed the farm-labor market from one of surplus to one of stringency, that the Agriculture Department's over-all plan for mobilizing farm workers was ineffectual to meet the pressing war-manpower needs in agriculture.[4] Accordingly, in June 1942, the War Manpower Commission issued a directive to the Secretary of Agriculture in which it stated "that existing and anticipated requirements for agricultural workers for the production, cultivation or harvesting of agricultural commodities essential to the effective prosecution of the war render necessary certain movements of such workers between areas and crops" and instructed the Secretary to "take such action . . . as may be necessary or appropriate to assure that: (a) agricultural workers, required for the production, cultivation or harvesting of any agricultural commodity essential to the effective prosecution of the war, are provided needed transportation facilities, and (b) non-local agricultural workers and their families, transported or housed pursuant to this directive, are provided needed health and welfare services."[5]

The first concrete product of this directive was the Emergency Farm Labor Transportation Program which provided for the recruitment, transportation, and housing of both domestic workers and of Mexican nationals to be employed on American farms; later, workers from the Bahama Islands, Jamaica, Newfoundland, and British Barbados were also included in the program.[6] Its

[2] The prevailing wage as a standard of wage regulation was adopted also on a national scale by such emergency Federal agencies as NRA, FERA, WPA, and PWA. Wide application of the prevailing wage concept in farm and rural areas was made by the Farm Security Administration during the construction phase of its rural housing program between 1935 and 1940. By 1936, some 30 States had enacted prevailing wage laws affecting the pay of workers employed for contractors and subcontractors engaged in construction work for the Government.

[3] The one outstanding exception has been, of course, the Sugar Act of 1937 under which the Federal Government received, for the first time, a legislative mandate to establish "fair and reasonable" minimum wages in at least one sector of the agricultural industry, namely, in the production of sugar beets or sugar cane in connection with Federal payments to producers. For examples of local wage determination in California agriculture in the 1930s, see M. R. Benedict and R. L. Adams, "Methods of Wage Determination in Agriculture," *Journal of Farm Economics*, 23: 71–88 (February 1941).

[4] The plan, incorporated in Memorandum 975-10 (Mar. 12, 1942) of the Secretary of Agriculture, did not, for example, embrace measures for bringing farm workers and farm employers into a practical and equitable wage-bargaining relationship obviously needed to prevent the steady drift of farm workers to nonagricultural employments.

[5] War Manpower Commission, Directive No. 7, June 24, 1942.

[6] The Secretary delegated the responsibility for its establishment and operation to the Farm Security Administration, the agency within the Department which in the past had had experience in providing shelter and other needs for migrant agricultural workers.

The program for importing Mexican nationals was effectuated by an international agreement with Mexico on Aug. 4, 1942. Similar formal agreements or exchange of letters providing for the recruitment and transportation of their nationals for agricultural employment in the United States during the war were negotiated with the Bahama Islands in March 1943, with Jamaica in April 1943, with Newfoundland in March 1944, and with British Barbados in May 1944. A special agreement was also made between the United States and

purpose was to promote mobility of farm labor so as to maximize the utility of available and potential agricultural manpower in this and neighboring countries. Its function was to supply American farmers with as nearly the exact volume of nonlocal labor as was needed in addition to the numbers already available in a given labor-stringency area of employment. Though provisional and experimental, the program made a significant contribution to the solution of labor-supply problems in agriculture during a critical period of the war.[7]

Guarantees with regard to wages, periods of employment, and other working conditions, including housing, health, and general welfare, were made to those workers recruited and transported under the auspices of the program. With respect to wages, they were to be paid "*not less than the effective prevailing wages as determined by the Secretary of Agriculture within the particular area of employment, . . . in no event . . . less than 30 cents per hour or its equivalent in piece-work rates.*"[8] The introduction of the prevailing wage as a standard of wage determination reflected two fundamental needs of the program, both of which coincided with the larger requirements of the farm-labor market as a whole: (1) the need for ascertaining and making familiar to all concerned the prevailing wage rates in the major areas of farm employment; and (2) the need for establishing uniform and standard farm wages for the same or comparable types of agricultural tasks. The emergency character of the manpower situation and the fact that agriculture had such an unpretentious background of experience in establishing wage norms combined to give the prevailing wage method a very high degree of acceptability for arriving at some quantitative standard useful in serving the contemplated purposes.

The responsibility for making findings of prevailing scales of wages was assigned to individual State agricultural wage boards which were directed to hold public hearings for the purpose of receiving information and data required to ascertain such findings.[9] "Wage rates being paid in the potential area of employment," the instructions read, were to "be reported to the Secretary of Agriculture" and were "not to become effective for the purposes of this program until approved or amended by the Secretary."[10] The appointment of an agricultural wage board by the Secretary of Agriculture became necessary only when farm workers were to be recruited and transported under this federally-financed program, following a certification for their need. As in the case of the use of the prevailing wage norm in other programs on other occasions in which the Government was directly or indirectly involved only the hiring employer was required to pay as a minimum the prevailing wage fixed under the Farm Labor Transportation Program.

During the active life of the program, 19 State agricultural wage boards were established,[11] and they succeeded in ascertaining and recommending

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Canada in April 1942 permitting grain combines and farm workers to cross the international boundary for the purpose of harvesting small grain in the western States.

[7] During the 10 months, August 1942 through June 1943, when the Farm Security Administration was fully responsible for its administration and operation, a total of about 36,000 agricultural workers were moved into labor-shortage areas of employment, each of them over a distance well in excess of 200 miles. More than one-third (37 percent) of this total represented domestic workers. About 8,000 were domestic seasonal laborers utilized in harvesting war-needed crops, 5,000 were domestic year-round workers placed on dairy, poultry, and livestock farms, and almost 23,000 were foreign agricultural workers. Of the latter total, practically 90 percent were Mexican nationals, and the rest Bahamians.

[8] Farm Security Administration, Instruction 478.1, Feb. 4, 1943.

[9] These agricultural wage boards were government bodies, composed of Federal employees, with Statewide jurisdiction. Each board was composed of four members appointed by the Secretary of Agriculture: two nominated by one or more agencies in the U. S. Department of Agriculture, one by the War Manpower Commission, and one by the U. S. Employment Service. Each of these members had an alternate, also nominees of the foregoing agencies. The chairman of each board, designated by the Secretary of Agriculture, was one of the members representing the Department of Agriculture. (The Secretary departed somewhat from the standard composition of the wage boards by appointing a nongovernment employee as one of the members representing the Department of Agriculture on the wage boards for Oregon, Montana, and Indiana.) A technical advisor, also the Secretary's appointee, served as an ex-officio member of the board with no voting rights.

[10] Farm Security Administration, Instruction 478.1, Feb. 4, 1943.

[11] Wage boards were set up in Arizona, California, Colorado, Connecticut, Florida, Idaho, Indiana, Michigan, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Oregon, South Dakota, Washington, and Wyoming.

for the Secretary's approval some 300 different wage rates for various seasonal operations in farming.[12] These findings were made principally through the medium of some 40 public hearings.

### THE CONCEPT OF PREVAILING WAGES

*The Prevailing Wage as a Wage Norm.* Basic to its acceptance as a wage norm is the assumption that the prevailing wage practice represents a fair and equitable bargain between the employer and the worker. This assumption is grounded on the faith that the majority of employers can "be trusted to pay a nonexploitation wage" and that in order to ascertain the "fair wage" it is but necessary to bring "to light the predominating wage practice" in the market place.[13]

It will be recognized that the identification of the "predominant wage" with a "fair wage" is rooted in the classical theory that the prevailing wage is a product of existing conditions of labor supply and demand. But not to be overlooked is the fact that although prevailing wage rates, like other prices, are crystallized in the market by supply and demand, their determination on this basis is possible only in the perfect or near-perfect market, the latter being, above all, one in which the prevailing wage is a resultant of competitive bidding for labor.[14] To the extent, therefore, that buyers of labor are in a dominant position in the market by virtue of concerted action or to the extent that buyers, acting even on an individual basis, are in a position to exercise effective authority over their quoted prices, the prevailing wage is not likely to be a "fair" or "unexploitative" wage, if by the latter we mean the wage which prevails in a perfect market—a competitive wage.

If we train these observations on the farm labor market, it is possible to test the validity of the assumption that the prevailing wage is a fair and equitable wage norm when applied to the agricultural industry. Thus, not only does the buyers' side of the labor market contain monopsonistic elements with a virtual absence of monopolistic controls on the sellers' side,[15] but the noneconomic determinants of wages, such as chance, custom, and tradition, are unusually significant in agriculture. The farm labor market departs from perfection, also, by virtue of the fact that the wage-determining process in agriculture is, for the most part, on an individual and confidential basis with the terms of employment being decided by firms which are quite numerous and widely dispersed and which hire, on the average, comparatively few workers for relatively short periods of time. This promotes variations rather than uniformity in pay for the same or comparable classes and grades of labor engaged in well-defined tasks within a given locality.

A further imperfection in the competitive functioning of the farm-labor market is reflected in the partial influence of worker income on the determination of prevailing wage rates by reason of the effect of such income on the labor supply. It has been observed that in some parts of the country and for certain types of farm work the higher the wage rates paid the less labor will be supplied. This will be recognized as the contention of some students of labor economics that a part of the Nation's supply curve of labor has a pronounced negative slope.[16] Thus, referring to the harvesting of cotton in Arizona, for example, the inverse relationship between wage rates and labor supply has been described as follows: "Higher wages per hour sometimes decrease the output per month because if a man earns the same amount with less hours, the result is it takes more men to do the same work. It seems to me that the rate should be set in such a way that the worker will have an incentive to work more days per month. . . . A rate which encourages men to work fewer days . . . will call for more workers. . . ."[17] Such an approach

[12] The Secretary's wage determinations were not published in the *Federal Register*, but they received publicity in the press and in public-posted notices.

[13] For a fuller discussion of this point, see T. W. Holland, The Prevailing Minimum Wage Standard of the Public Contracts Act (Ph.D. dissertation, University of Wisconsin, 1939), 10.

[14] At least two other major attributes of a perfect market are complete and constant awareness of market conditions on the part of buyers and sellers, and their ability, readiness, and willingness to act on the knowledge of these conditions.

[15] Experience under the program showed that wage fixing by farm employers acting together, overtly or tacitly, was not too uncommon a practice in the more commercialized farm areas requiring comparatively large numbers of workers per farm. While such behavior is not always in the interest of keeping wages from rising too high, it does invalidate the basic assumptions underlying the contention that the prevailing wage is a fair and equitable wage norm.

[16] See Richard A. Lester, *Economics of Labor* (New York, 1941); and John T. Dunlop, *Wage Determination Under Trade Unions* (New York, 1944).

[17] E. D. Tetreau, University of Arizona, testifying before the Arizona USDA Wage Board, Transcript of Hearings, Arizona, Sept. 23 and 24, 1942.

to wage determination raises, of course, a further doubt respecting the accuracy of characterizing a prevailing wage as a "fair wage."

It is admitted, moreover, that when tested by other factors entering into specific wage determinations, such as the ability of the prevailing wage to be a living wage, to sustain a socially desirable level of economic welfare or to represent a fair value of the services rendered, the prevailing wage as a fair standard leaves much to be desired. On the other hand, the prevailing wage as a fair standard must be evaluated in terms of the effect of its dynamics on employers' ability to pay. An inordinately rising trend in wages, particularly in an industry such as agriculture which is geared to a comparatively low wage structure, may create hardship among a substantial number of employers.[18]

*The Prevailing Wage Under the Farm Labor Transportation Program.* The prevailing wage system, as it operated under the FLTP, was not overly concerned with all of the foregoing questions of substance associated with the prevailing wage as a wage determinant, even though it had to face most of them. As in the case of its utilization in other employments, the prevailing wage as it applied to agricultural operations under the program acquired economic significance and administrative utility for two reasons. It was viewed as a regulatory minimum wage norm; and it retained its underlying purpose, namely, to maintain existing wage levels and to preserve current wage-payment practices. Functionally, it served as an indispensable aid to recruitment and prevented program-recruited workers from exercising a depressive effect on current levels of agricultural wages.

The system was not designed to be a vehicle for eliminating substandard wages in agriculture, for narrowing industry-farm wage disparities, nor for equalizing wages for the same or comparable work between geographic regions. Transported workers under the program were merely insured the standards of work approximating those prevailing in the area of employment prior to their arrival therein. Once prevailing wages were determined for given farm tasks in and for specific geographic areas, they were expected to serve as minimum entrance rates. At no time in the course of employment during the current season were wage rates to fall below this minimum, although ostensibly they could fluctuate above it.

As events later proved, the determined prevailing wage became in practice, for the most part, the actual wage for the duration of employment, with the implicit assumption by employers that it was also the maximum above which they were not morally obliged to go. Observations were current that such a development might run counter to the interests of agricultural hired workers as well as nullify the efforts of the United States Department of Agriculture to overcome labor shortages in agriculture. Hired farm workers, it was argued, were employed in a traditionally low-paying industry and now during a period of substantial wage increases had much to gain from the free play of the labor market forces. Neither was there a lack of awareness that the war-agricultural wage policy—of permitting farm wages to rise unhindered up to the rather high level of $2,400 a year—might be compromised should the prevailing wage standard result in arresting necessary wage increases in agriculture, such accessions generally being considered essential in overcoming labor shortages in the industry.

But the position prevailed that since prevailing wage determinations would be made on a farm-wage structure that was comparatively high and was rising, they would reflect, however imperfectly, the seller's position in the labor market. In fact, subsequent developments demonstrated that the prevailing wage norm was not accepted by farm employers with universal equanimity. In any event, although it was generally realized that the application of the prevailing wage concept, coupled with the influx of nonlocal farm workers into an area of employment, would have a retarding influence on the upward trend of agricultural wages in that area, none was ready to justify their continuing upward spiraling simply

[18] For example, in testifying before the California Agricultural Wage Board, one sugar-beet grower expressed his views in this connection as follows: "I think I can speak for the beet growers in this district, and I ask you to take into consideration the fact that you will probably find that the wages being paid today are... (on the average) 70 cents or 75 cents (per hour); and that this rate . . . has been predicated not because of the growers' ability to pay it, but because of the scarcity of labor. We would like to have you take into consideration in your recommendation that we cannot continue with business if we have to pay 70 and 75 cents an hour; that 55 cents an hour is all the traffic will stand, and that is what we should be paying now." Transcript, Wage Hearings, Sacramento, Calif., Aug. 31, 1942.

because the sellers of labor were favorably situated.

*Determination of Prevailing Wages.* It became almost immediately apparent that, although the prevailing wage concept itself was a comparatively simple one, it had to be precisely defined if it were to be uniformly interpreted and effectively applied. Conceptually, the prevailing wage was interpreted to be the predominant wage practice of employers at a particular time with respect to individual tasks or operations on farms or in orchards within a designated area of employment in a State. But "predominant," the key term of the concept, suggested the use of some statistical measure of central tendency for the computation of the prevailing wage. Moreover, whether the selected form of average was to be derived from an analysis of wage data as represented by the frequency distribution of the number of employers or of the number of workers, or both, was an ambiguity that had to be clarified. And finally, the process of determining a prevailing wage posed the problem of the allowable degree of deviation from the chosen form of average. In the case of a modal concentration, the possible existence of dual modes had to be faced.

These statistical quandaries were largely resolved by defining the terms crucial to the meaning of a prevailing wage. Thus, the *Procedural Guide* for the wage boards defined prevailing wages as "the most representative or typical cash wages being paid in the area of employment at the time of the public hearings." The most representative or typical wage was interpreted "as the most frequent wage found *to be paid* for an operation in one or more crops."[19] Statistically, therefore, the prevailing wage appeared to be *the mode* based on the frequency *of payment* rather than on the frequency *of receipt* of a wage rate. And, although the wage boards did not consider themselves rigidly bound by this formula, in actual practice the frequency with which a rate was quoted by employers, regardless of the number of workers who received this rate, primarily governed the findings of a wage board.[20]

There was, however, an important qualification to the above interpretation of the prevailing wage. Elsewhere in the *Procedural Guide*, the stipulation was made that "in reporting wage rates for the Secretary's approval, . . . consideration should be given to: (a) probable changes in the level of such rates during the 30-day period following the public hearings; and (b) rates sufficiently high to attract workers to the area of employment where the transportation program is to be applied."[21] Thus, while the prevailing wage meant primarily that wage which the majority or the largest number of farmers were paying or willing to pay,[22] it also carried the connotation that it should be a wage at which labor could be successfully recruited and retained.

Illustrative of conditions that complicated the determination of prevailing wages in agriculture and which impelled special consideration in the process of determining them under the FLTP were: (a) the great prevalence of piecework rates and wide variations in other methods of wage payment, (b) absence of uniform and stabilized wages for the same or comparable operations, (c) lack of standardized contents of farm tasks or operations, and (d) the more frequent manifestations of geographical wage differentials in farming than in nonagricultural occupations. It was necessary, for example, to concretize the point that prevailing wage findings were to be made on a piecework basis as well as on a time basis, or in terms of any combination or variation from these two basic methods of wage payment, if several of these wage-payment methods were in force in the area of employment; that piecework rates were to be calculated to yield the hourly or other time rates found to prevail; and that in order to arrive at such findings, it

[19] *Procedural Guide for Agricultural Wage Boards Under the Farm Labor Transportation Program of the U. S. Department of Agriculture* (April 1943), 11.

[20] Although workers were given the opportunity of presenting evidence at the public wage hearings, their testimony did not materially alter the mechanics nor the findings of the wage boards. In fact, in only a comparatively few instances did agricultural workers or their representatives appear to testify at these hearings and such testimony provided but a weak countercheck of the evidence presented by employers.

[21] *Procedural Guide*, 11.

[22] Where prevailing wage scales had not crystallized at the time of the public wage hearings because farm operations had either not begun or had only recently commenced, the findings, based largely on employer's wage quotations, reflected not the wage rates actually in force but rather those *offered* by farm employers. Thus, in the nature of the case, the prevailing wage findings in many cases meant the *offered* wage rather than the *going* wage, or it represented a rate paid in the early stages of an agricultural operation which tended to be the lowest possible wage that had any validity to the prevailing wage concept.

would be necessary to ascertain the amount of work that an adult of average ability and diligence could perform under average field and crop conditions in a prescribed unit of time.

Of the possible two frames of reference generally used for determining prevailing wages, the community in which the employing unit is located or the industry as a whole regardless of the location of its component plants, it was the former which was adopted under the program. The selection of the community scope of coverage was dictated by the existence of differentials in wages for the same or comparable farm operations even within the confines of a section of a State and was a necessary accommodation to the limited geographical reach in agriculture of uniform conditions essential to standardized wages. Accordingly, separate wage findings were required to be made for each agricultural area of employment within a State. "Wage findings," it was admonished, "were not to be averaged to arrive at a single rate for two or more areas of employment when prevailing wages were found to differ as between areas" for the same or comparable farm operations.[23]

In short, local as well as sectional wage differentials were to be maintained in accordance with existing geographic variations within a State. By thus concentrating the employers and workers within a limited geographical area for purposes of wage determination, uniformity of wage practices for the same or comparable work under approximately equal conditions of employment was reasonably attained, and this tended to create an ideal situation in which the prevailing wage clearly reflected a true existing wage norm, provided the prevailing rates were competitive.

PROBLEMS OF DETERMINING PREVAILING WAGES

*Inadequate Wage Data.* The primary requirement for the successful application of the prevailing wage in any program requiring its use as a wage standard is obviously the existence of adequate data on market rates of pay. But this was precisely the requirement that in a significant number of cases could not be met in the course of the operations of the Farm Labor Transportation Program. In part, this failure was a product of the departure from the original design of the program and, in part, it was inherent in the nature of the agricultural industry.

The determination of prevailing wages rested on the assumption that the FLTP was to *supplement* the farm labor supply in a labor-deficit area where operations were reasonably well in stride and where, therefore, current wage scales for the season were crystallized. However, the validity of this assumption waned as the program was pressed into the service of helping to meet *anticipated* labor shortages in areas where harvesting or other farm operations had either just started, had not reached their peak, or had not begun at all.

The series of cases which best typified this problem were those associated with the employment of workers recruited in Mexico for employment in sugar-beet operations. Requirements for this labor in a number of States were so urgent that the Secretary was advised that "the recruitment of workers should not be delayed" even if this meant proceeding without the prior appointment of wage boards needed to determine prevailing wages.[24] Such situations, however, were not confined to sugar-beet cases nor to those involving the employment of foreign agricultural workers. Several hundred domestic seasonal farm workers were in demand for harvesting fruits and vegetables in the State of Washington, but the report submitted in connection with this requisition stated that "prevailing time and piecework rates . . . have not become sufficiently stabilized as yet to enable the wage board to report such findings."[25] Similarly, data on prevailing wages for harvesting citrus fruits in Florida were required for the purpose of recruiting labor under the program, but since the majority of growers had not begun harvesting, the current rates, it was observed, would probably "not be representative as the season advanced."[26]

This problem also evolved from the peculiarities associated with agricultural production and from

[23] *Procedural Guide*, 9.

[24] Memoranda, Administrator, Farm Security Administration, to Secretary of Agriculture, re: "Recommendation of Recruiting Wage Rates for Sugar Beet Operations in the Yakima-Toppenish Area, Washington," Apr. 8, 1943; "Recommendation of Recruiting Rates, Preston Area, Idaho," May 6, 1943; "Designation of Agricultural Wage Boards for Nebraska and North Dakota," May 6, 1943.

[25] Memorandum, Administrator, Farm Security Administration, to Secretary of Agriculture, re: "Certification of Need for Recruiting and Transporting Orchard Workers for Northcentral Washington, etc.," Apr. 15, 1943.

[26] Memorandum, Administrator, Farm Security Administration, to Secretary of Agriculture, re: "Findings of Farm Labor Wage Board for Florida," Dec. 7, 1942.

the varied patterns of farm employment. Uneven crop maturities within a given area of employment created the difficulty of ascertaining at one particular time the prevailing rates of pay for harvesting all crops in such an area. In New Jersey, to cite an example, the Wage Board was instructed to report findings on wages being paid for harvesting asparagus, an operation that was actually under way early in the spring when the board convened in public session. It was realized, however, that labor recruited under the program for the asparagus harvest would be used also in harvesting crops immediately succeeding asparagus. But as operations in these crops had not begun at the time the wage board convened, no basis existed on which to obtain their going rates.

A variation in the character of this difficulty arose in connection with the necessity of determining prevailing wages for crop operations not currently under way and considered of secondary importance in relation to those for which workers were principally recruited under the program and for which prevailing wage data were partly available. For example, Mexican nationals were recruited and transported into a number of States (Colorado, Wyoming, Nebraska, and Idaho), primarily for work in sugar beets, involving two major sets of operations: preharvesting work, embracing blocking, thinning, and hoeing the beets, and harvesting, consisting of topping and loading the product. But between the end of the first set of operations and the beginning of the second occurs a rather long summer hiatus, during which no substantial work is required in sugar-beet culture. It was anticipated, therefore, that the Mexican laborers would be transferred to and utilized in those crops that matured during the summer beet-growing period, thus maximizing their employment and meeting the labor requirements in those "in-between" crops. Accordingly, the wage boards in those States were faced with the responsibility of recommending not only the prevailing rates for preharvesting operations in sugar beets that were under way, but also the rates of wages for crop operations that had not begun but which were scheduled to commence during the summer, as well as the scales of pay for the beet-harvesting operations in the late summer and fall of the year.[27]

[27] Fortunately in these and similar cases involving sugar-beet operations, the Secretary of Agriculture was able to use as recruiting rates the minimum wage scales fixed by him under the Sugar Act of 1937, as amended.

The existence of the foregoing conditions necessitated a modification of the prescribed method for fixing a wage base for purposes of recruitment. Two categories of wage findings were accepted: *actual prevailing* rates for farm operations well under way, and *anticipated* rates for operations not yet begun or insufficiently advanced. The latter were conditionally approved by the Secretary of Agriculture as "recruiting" or "entrance" rates with the understanding that they were subject to revision if at a later specified date they were discovered to be below actual currency. This practice carried the possibility that the conditionally-approved anticipated rates might become the actual prevailing wages, particularly where transported workers under the program played a paramount role in satisfying the labor requirements of an area of employment. This eventuality was difficult to avoid.

*Area of Employment and Geographical Wage Differentials.* Since geographic location was recognized as an important over-all influence on the prevailing wage structure and since the adoption of the prevailing wage concept implied acceptance of existing geographical wage patterns in agriculture, the policy of the operating agency was to preserve them unless the reasons were impelling to do otherwise.

Program procedure did not rigidly define "the area of employment" to which prevailing wage findings applied. But the general operating assumption was that such an area covered a territory not less than a county and no larger than a State. Usually, several counties within a State were combined for purposes of wage determination. In a few instances, the entire State was considered as one area of employment, and on one occasion parts of several States were combined for this purpose.[28] In the majority of cases the competitive factors affecting producers of a given farm commodity in a selected area of employment were about on the same economic plane and the general conditions and type of employment were such as

[28] For example, the entire States of Wyoming and of Montana were designated, respectively, as the areas of employment for the purpose of ascertaining the prevailing wage scales for sheep herders and lambers; parts of Nebraska, Wyoming, and Montana were defined as a single area of employment for the purpose of determining prevailing rates of pay for Mexican nationals recruited for employment in sugar-beet operations.

to promote reasonable uniformity in the wages paid.

However, reasonable wage uniformity in the area of employment did not entirely eliminate the problem of individual variations above the determined area-prevailing wage. The question arose: Should the wage scales to Government recruited and transported workers in such cases be governed by the area-prevailing rates (which would have been sufficient for the grower to pay in order to qualify as an employer under the program) or by the wages actually being paid to workers already employed on the specific farm at the time of Government delivery? A satisfactory solution of this problem required an accommodation of the concept of "area of employment" to the individual farm as an employing unit. It would have given the latter a preferred status within the larger area of employment so that farms paying wages higher than those ascertained as prevailing for the geographical area as a whole were to be considered as separate areas of employment for the purpose of applying the prevailing wage concept under the program.

Such an adaptation, however, was not made and disparities in wages paid for like or comparable work on the same farm were handled by the administrative agency on an individual adjustment basis between the employer and the worker in the nature of a labor-relations problem. In general, those settlements were based on the recognition that workers recruited under the program were entitled to be treated as other workers on the same farm with respect to the application of standards (skill, seniority and conditions of employment) governing the payment of differential rates for similar or comparable work.

Despite the policy of retaining wage differentials according to well-established economic and customary areas of employment, in actual practice it never became so rigid as to handicap too severely program operations. Sufficient flexibility was exercised to reconcile this policy to practical exigencies by rationalizing the geographic application of the prevailing wage in terms of its practical effectiveness and utility to the program.

A wage determination case in New York State illustrated a situation where the preservation of wage differentials between two adjoining counties was considered to be impracticable because the primary wage-making factors of the past responsible for these differences had largely become obsolete. Thus, despite its findings of 30 cents an hour in Erie County and 40 cents an hour in Chautauqua County for harvesting fruits and vegetables in September 1942, the New York Wage Board recommended a compromise hourly rate of 35 cents for the Secretary's approval. In view of the fact that the existence of a wage differential with respect to these operations between the two areas of employment was established as a traditional and current fact, the recommendation of the board involved a departure from the prevailing wage concept. Accordingly, it could be justified only in the light of existing new wage influences or other compelling conditions of immediate origin. The facts which emerged in this case were of such a character, and the compromise rate was therefore approved.[29]

The obverse side of this approach was illustrated in a case in which the Secretary withheld approval of a reported wage differential of 10 cents an hour in the harvesting of asparagus and in general farm work between two agricultural regions in southern New Jersey. This action was supported on the grounds that "maintenance of a stable rate structure in the whole area for the season would appear to demand that excessive wage disparities be reduced" and that "approximate equalization of wage rates . . . would forestall labor discontent . . . stabilize employment . . . and provide somewhat comparable power to (employers) to attract workers under the Farm Labor Transportation Program."[30]

[29] The heavy wartime demand for labor in 1942 resulted in drying up the conventional sources of seasonal workers upon which commercial farms in both counties largely depended. This necessitated tapping other and more distant sources of seasonal farm labor to meet their requirements. The Farm Labor Transportation Program undertook this task and workers were recruited in West Virginia and housed in a Farm Security Administration Farm Labor Camp designed to serve farm employers in both counties. The establishment by a Federal Government agency of a common labor pool, consisting of workers of more or less equal farm experience and ability, created a condition which largely nullified any justification for wage differentials that formerly existed, and made it impractical to retain them. For, assigning workers to what appeared to them to be essentially comparable farm work at two different wage rates, the geographical location of that work notwithstanding, would surely have been interpreted as an arbitrary action and was bound to be resisted.

[30] Letter, Assistant Secretary of Agriculture to Chairman, New Jersey USDA Wage Board, May 17, 1943.

The apple-harvesting case in the State of Washington, on the other hand, illustrated a situation recommendation for ironing out wage differentials in which approval was denied the wage board's between two labor-competing areas. Substantial evidence presented at the public hearings and assembled from other sources revealed that in September 1942 growers in Wenatchee Valley were paying mostly 7 cents a box or 60 cents an hour for picking apples; wage quotations for the same operation in Yakima Valley were generally 8 cents a box or 65 cents an hour. Contrary to these prevailing scales, the Washington Wage Board recommended that the rates be equalized at the lower level prevailing in the Wenatchee area.

In ruling that the differentials be maintained, the Secretary resorted to the rule of reason and necessity. The Wenatchee area, it was observed, being larger required more seasonal labor in apples and having a longer apple harvesting season provided longer employment than Yakima, thus affording an opportunity for greater earnings for a larger number of workers in that harvest even at a lower wage rate. These wage-making factors, among others,[31] appeared to economically justify the variation in pay for picking apples in the two respective areas. Moreover, it was pointed out that the adoption of the lower rate for Yakima would not serve as an effective prevailing wage for "were the rates for Yakima set below the original levels decided upon by representative growers, it is likely that workers transported under the program to Yakima would receive less than those already at work in the apple harvest."[32]

*Durable and Competitive Prevailing Wages.* As more experience was gained in the use of the prevailing wage concept under the program, it became evident that if the determined prevailing wage did not assume a dynamic character it ran the risk of becoming obsolescent; that an official wage determination had relevancy only at the precise time at which it was made; that at any time thereafter the true prevailing rate might vary from the originally-determined one. If, in such event, there is no redetermination, the fundamental premise that the prevailing wage is the predominant wage in the market is undermined, to say nothing of the dissatisfaction which is bound to develop among those workers who do not benefit by a rise in the prevailing wage.[33] Were the prevailing wage to fall in the course of the season, it was taken for granted that equal access to a downward revision would not be available to employers if the new findings revealed pay scales below the originally-determined prevailing wage.

This experience caused the instruction to be given to the wage boards that "in reporting wage rates for the Secretary's approval . . . consideration should be given to the probable changes in the level of such rates during the 30-day period following the public hearings."[34] It was designed to encourage the wage boards to anticipate the necessity of revising wage findings not considered durable for the season and to even reflect expected changes in their findings in the first instance. However, since the instruction was not implemented by any specific wage-adjustment formula, most of the boards were neither prepared nor disposed to handle changes in prevailing wage levels.

Necessary revisions of initially-determined prevailing rates were made, at first, through the cumbersome process of reconvening the wage board later in the farm season for the purpose of reexamining anticipated or reported changes in pay scales in a given area of employment. Subsequently, an alternative procedure was followed which lent more flexibility to the process of redetermining prevailing wages. Where public hearings had already been held in making the initial findings, the wage board was permitted to submit subsequent wage findings for the same operations

[31] A larger number of operations in other crops in Yakima than in Wenatchee overlapped the apple harvest in both areas. This situation resulted in a shorter apple-harvesting labor supply in the former than in the latter area even though the apple harvest in Wenatchee was more advanced.

[32] Memorandum, Administrator, FSA, to Secretary of Agriculture, re: "Findings of the Wage Board for State of Washington," Sept. 25, 1942.

Prior to the wage hearing, it was established that representative growers in the Yakima area had agreed to offer apple pickers a piecework rate above the level actually recommended by the wage board itself. Cf. Telegram, Chairman, Washington USDA Wage Board, to Secretary of Agriculture, about Sept. 20, 1942.

[33] Aside from the possibility that general labor market factors may cause increases in wage rates, it is a common phenomenon in agriculture for piecework rates to rise in harvesting fruits, vegetables, cotton, sugar beets, etc., in order to sustain constant hourly earnings as the crop becomes sparser with each successive picking. Also, wage rates have a tendency to start at low levels as the crop initially matures and labor demand is comparatively light and to increase as the farm or orchard product generally ripens with a corresponding rise in harvest labor requirements.

[34] *Procedural Guide*, 11.

on the basis of field investigations and to approve such findings in executive session before transmitting them to the Secretary.

Furthermore, wages reported as current by the wage boards had to be at levels adequate to compete successfully with rates of pay in nearby urban areas for comparable tvpes of labor and sufficiently attractive to recruit farm workers from areas of employment where they had been previously employed during the agricultural year. For example, in anticipating the recruitment of agricultural workers from Arkansas for employment in vegetables in the Columbia Slough Area (Multnomah County) of Oregon, the following observation was made: "It is impossible to estimate the number of these recruited and transported workers who will remain in agriculture in view of the proximity of their work to defense plant industries in the Portland area which are paying 25 cents to 35 cents per hour more than these farm workers can hope to receive for their efforts. . . . At the present time [March 1943] wage rates [in agriculture] range from 50 to 75 cents per hour. . . . A high wage rate in this area is essential to stability of [agricultural] employment."[35] In the same vein, a representative of an agricultural workers union, testifying before the Arizona Agricultural Wage Board, argued that the then current wage scales in seasonal farm employment in Arizona were yielding lower annual earnings than nonagricultural employments paying equal wage rates to unskilled labor and that the prevailing farm wage rates were yielding insufficient earnings to attract or retain workers in agriculture in a highly competitive war-labor market.[36]

In an endeavor to alert the wage boards to the need for competitively realistic levels of farm wages, they were instructed to weigh "the ability of the prevailing rates to attract workers to the area of employment where the transportation program is to be applied."[37] In effect this provision gave the wage boards ample leeway to depart from a strict interpretation of the prevailing wage in the interest of maximizing its utility.

One of the most illuminating efforts to exploit this flexibility was made in connection with the problem of determining an effective prevailing rate for picking long-staple cotton in Arizona in the fall of 1942. A wage quotation above the prevailing rate was necessary to meet a competitive labor situation faced by the cotton producers in that State. After demonstrating the extent to which Arizona was dependent on labor from outside the State for harvesting its crops, one of the members of the wage board observed that "in this year [1942] of labor shortage a sufficient supply of workers can be expected only if wages compared favorably with those paid in competing agricultural areas."[38] Accordingly, he stated, "the Board can reasonably conceive its function to be the recommendation of a rate for the season which will result in a labor supply adequate to successfully harvest the 1942 long-staple cotton crop—that is, a rate which may be expected to prevail during peak operations. Any other recommendation will not be valid as the season progresses, may hamper the procurement of an adequate labor supply and may result in harvest delays and losses in an important war material."[39]

This appraisal of the situation did not, however, lead the Arizona Agricultural Wage Board to recommend a rate above that found to be unquestionably prevailing at that time for picking the cotton. A review of the finding (3 cents per pound for picking long-staple cotton) in relation to the conditions customarily surrounding the cotton harvest in that State revealed, among other

[35] Memorandum, W. T. Geurts, Agricultural Labor Specialist, Farm Security Administration, Portland, Oregon, to W. A. Duffy, Regional Director, FSA, re: "Pertinent Data Relating to Certification of Need for Transporting Seasonal Workers for Multnomah County, Oregon," Feb. 25, 1943.

[36] Representative of the United Cannery, Agricultural, Packing and Allied Workers of America. Transcript, Wage Hearing, Phoenix, Arizona, Jan. 4, 1943.

[37] *Procedural Guide*, 11.

[38] It was estimated that at the then currently prevailing rate of 3 cents a pound for picking long-staple cotton, plus allowances for an increase as the season advanced, an experienced cotton picker would still earn only about 42 cents an hour for the season—an earning that compared unfavorably with wage scales in effect for agricultural workers in other crops and farm operations in nearby labor-competing areas. At this time, prevailing hourly rates, as reported by the U. S. Employment Service, for harvesting oranges, grapes, tomatoes, walnuts, and sugar beets in California ranged between 50 and 65 cents. These operations were expected to continue well into the peak of the Arizona cotton harvest.

[39] Omer Mills, Farm Security Administration, statement at the public wage hearing held by the Arizona USDA Wage Board, Phoenix, Arizona, Sept. 23, 1942.

things,[40] that the cotton-picking rate usually rose between the start and the peak of the harvest. Consequently, the reported finding, which was made in the early stages of the cotton harvest, was not expected to retain its representative character as the season advanced. The Secretary approved the reported going rate, but two weeks following this determination he advised the wage board that an upward revision of the prevailing wage was necessary and that the Commodity Credit Corporation was prepared to underwrite this increase by raising the Government support price of long-staple cotton.[41] The board reconvened to present this proposal, among others, to the cotton growers and then unanimously agreed to raise its prevailing wage finding from 3 to 4 cents a pound for picking the fiber.[42]

*Method, Equivalents, and Differentials of Wage Payment.* The necessity of furthering one method of wage payment as opposed to another under conditions of their simultaneous existence raised the nice problem of reconciling conflicting employer and worker preferences within the system of prevailing wage determination. This problem arose in connection with the employment of program-recruited workers who in general lacked experience at a given operation paid for usually on a production basis.

A situation which governed the necessity of selecting or registering a preference for a time basis of compensation arose in connection with the employment of Mexican nationals in the California sugar-beet fields in 1942. Their inexperience in this work prompted the furtherance of the piecework rate by employers but of the time rate by the workers; the former basis of payment, moreover, was the customary practice of the employers in meeting their labor cost while the latter was the usual method by which workers were compensated. This anomalous arrangement was a product of a system by means of which sugar-beet producers contracted their harvesting operations to labor contractors on a tonnage-payment basis while workers hired by the contractor were paid by him on an hourly basis. However, the contractual arrangements between the sugar-beet producers and the United States Department of Agriculture for supplying several thousand Mexican harvesters eliminated the labor contractor as a party to the wage bargain. This removed a link from the customary chain of wage payment that made possible the compensation of workers on an hourly basis.

Thus, when the California Agricultural Wage Board resolved the prevailing dual-wage payment practices in favor of the piecework method of wage payment,[43] the Secretary of Agriculture, following a strict interpretation of the prevailing wage determination, amended the findings by including the prevailing hourly rate in his determination.[44] Despite the Secretary's action, most of the Mexican nationals were hired at the prevailing tonnage rates. With no experience in sugar beets, no labor contractor to estimate field yields or bargain for them, and no adequate knowledge on which to bargain for themselves, the Mexican workers who found themselves working at tonnage rates were completely confused as to what their earnings would be on a piece-rate basis. Work stoppages and labor turnover followed when their demands for payment on a time basis were not satisfied.

The conference held to resolve this issue devised a formula which cushioned the earnings base of the affected workers during an initial conditioning period of their employment.[45] It provided that for a trial period of 12 work days the prevailing hourly rate of pay would be offered to those Mexican nationals unwilling to be paid on a tonnage basis. However, those among them who failed to earn this hourly rate on a tonnage basis of computation during this period were to be placed on

[40] Doubt existed whether the piecework finding would yield to an inexperienced or even average cotton picker the hourly rate of 30 cents required as the fixed minimum under the program. The question was also raised whether the finding represented a competitive rate in view of the alleged influence of the cotton-ginning companies upon its determination.

[41] Telegram, Secretary of Agriculture to Chairman, Arizona USDA Wage Board, Oct. 12, 1942.

[42] Telegram, Chairman, Arizona USDA Wage Board, to Secretary of Agriculture, Oct. 23, 1942.

[43] Testimony at the public wage hearings and the findings of a field survey established the prevalence of hourly as well as tonnage rates in Northern California but only tonnage rates were found to prevail in Southern California.

[44] That is, in addition to approving the reported tonnage rates, a rate of 65 cents an hour for these operations was determined as the prevailing time rate for Northern California. Telegram, Secretary of Agriculture to Chairman, California USDA Wage Board, Sept. 10, 1942.

[45] The conference, held at Sacramento on Oct. 6, 1942, was attended by representatives of the U. S. Department of Agriculture, the sugar-beet producers, and the Mexican nationals.

the prevailing tonnage-rate method of payment after the interim, but in no case were they to receive an hourly earning of less than 30 cents. Moreover, those who demonstrated ability of earning more than the prevailing hourly rate on the basis of their tonnage performance during the trial period were afterward to be paid either on a tonnage or hourly basis, the latter alternative to be mutually decided upon by the worker and the employer.

The terms of this agreement constituted an annex to the earlier wage board findings as amended by the Secretary of Agriculture. This agreement not only lent flexibility to the prevailing-wage determination process in situations where more than one method of wage payment obtained, one of which was subject to the workers' preference, but it also had the salutary effect of minimizing labor discontent and reducing labor turnover.[46]

The conference action, in resolving a method-of-wage-payment problem in favor of inexperienced agricultural workers in sugar-beet operations, invited the idea of applying a modified procedure for determining time rates for *learners in general* within the system of prevailing wage determination. These "learners' rates" were used when workers under the program preferred a time rate for performing operations generally, but not exclusively, compensated for on a production basis. The fixing of learners' hourly rates under the Farm Labor Transportation Program was a departure from the prevailing wage concept since they were lower than the prevailing rates for given operations. On the other hand, since they were permitted to be in effect for only a limited period, usually two weeks, they were considered as a tolerance from the prevailing wage in the nature of a temporary wage differential. At the termination of this period, the option was made reversible in favor of the employer who then acquired the right to continue to employ workers either at the prevailing piece rate or at the prevailing hourly rate, if the latter also obtained.

Since hourly earnings over a period of time are normally the principal concern of wage workers, it was found necessary to translate piece rates into hourly earnings. This was a matter of particular interest among workers who were inexperienced at farm operations compensable on a piece-rate basis. In addition, it was essential for the operating agency to know whether prevailing piece rates were capable of yielding to an average adult worker the minimum hourly earning of 30 cents which was a stipulated condition for approving such rates under the program.

But as reliable data on per man-hour output of workers of varied experience and ability were lacking, expected earnings were frequently difficult to determine for the typical pieceworker. Where reported piece rates were estimated to fall below the program's fixed hourly minimum, the Secretary's upwardly-revised determination actually served as a function of the average worker's estimated productivity.

For the same reason, piece-rate equivalents of prevailing hourly rates were at times found to be erroneous. Such equivalents were particularly important where both time and piece rates prevailed for the same operation and the worker was given the choice of accepting either. For example, the piece rate proved to be an inaccurate equivalent of the hourly rate for harvesting apples in the State of Washington in the fall of 1942. The wage board accepted the prevailing relationship between the two rates on the basis of the estimated performance of *experienced* apple pickers, but most of the workers recruited under the program happened to be inexperienced in this operation and failed to reach the hourly earning on a piece-rate basis.[47]

Furthermore, because the piece-rate system of wage payment links individual earnings to output,

[46] In again approaching the method-of-wage-payment problem affecting Mexican nationals recruited under the program later in the same year for blocking and thinning sugar beets in Imperial County, California, an effort was made to capitalize on the success of the general features of the Sacramento agreement. In this case, the wage board again reported the prevalence of both the piece rate and the time rate. Taking cognizance of the established fact that Mexican nationals strongly preferred payment on a time basis, the Farm Security Administration recommended that in approving the findings ($8 per acre or 50 cents per hour) the Secretary "urge that wherever possible payment of wages on acreage basis be kept down to a minimum." However, this recommendation was not adopted as the Sugar Agency in the Department of Agriculture objected to it. Memorandum, Administrator, FSA, to Secretary of Agriculture, re: "Findings of the Wage Board for California," Nov. 9, 1942; and Memorandum, Chief, Sugar Agency, to Administrator, FSA, Nov. 10, 1942.

[47] Results of a survey showed that the average experienced apple picker harvested about 75 boxes per day compared with 45 boxes averaged by the program-recruited workers.

it was essential in determining prevailing wages based on performance to consider the factors of production and the conditions of employment which were beyond the control of the individual worker but which nevertheless affected his productivity. Variations in the topography, soil conditions, and weed occurrences in fields and variations in age and height of trees, size of fruit, hillside location, and condition of underbrush in orchards are some of the factors governing the individual worker's productivity and are, accordingly, generally accepted in agriculture as justifying the prevalence of piece-rate differentials. It is customary, moreover, to pay workers premium piece rates when they are employed in harvesting such products as sugar beets, cotton, and vegetables in relatively poor fields or at the commencement of the harvest when yields are low. In order, therefore, to assure workers equal hourly earnings at different piece rates and to establish a comparable basis for evaluating the validity of the different wage quotations of employers, accurate and realistic determination of prevailing piece rates of pay involved the recognition and knowledge of the foregoing factors making for wage differentials.

But in this phase of the workings of the prevailing wage system weaknesses again occurred. Incomplete information concerning these factors was a handicap in determining precise and accurate wages in given harvesting and other farm operations paid on a piece-rate basis. Largely unavailable were detailed and organized data reflecting an association between prevailing piece rates and the yields and conditions of fields and orchards. As a result, most of the findings on prevailing piece rates were ascertained in the absence of such knowledge. Faced with complexities in agricultural labor operations, the wage boards usually reported a general piece rate qualified by such amendments as "higher and lower rates to be paid depending on crop conditions" or depending "on size of crop," or wage adjustments were to be made "for poor field conditions."[48] Such findings, perforce, had to be accepted.

[48] See the findings of the California and Arizona wage boards with respect to the harvesting of citrus fruits in southern California and the thinning of lettuce in Arizona. Telegram, Chairman, California USDA Wage Board, to Secretary of Agriculture, Dec. 12, 1942; Telegram, Chairman, Arizona USDA Wage Board, to Secretary of Agriculture, Jan. 5, 1943.

## CONCLUDING OBSERVATIONS

Legislative wage protection, collective bargaining, wage boards, wage conferences, and government wage commissions have been accepted, for the most part, as legitimate and necessary wage-determination methods and techniques affording protection to wage earners and promoting stability of production and employment in nonagricultural industries. But in farming, they have been and are today conspicuously absent. This lag is rooted as much in psychological causes as it is conditioned by economic and social factors.

The decline of opportunities for and the rise of economic barriers against progressive advancement of farm wage workers to entrepreneurial status have created a permanent, albeit a shifting, class of hired labor in American agriculture.[49] But the slow and reluctant acceptance of the reality of this group as a distinct entity in our wage-working population has placed it in a twilight zone of social responsibility. The result is that agricultural wage earners have neither the economic and social standing of farmers nor the legal and legislative protection of their conditions of employment afforded workers in other industries.

Economic and social factors have also militated against the bringing together of the farm employer and the agricultural hired laborer into a fair and stable bargaining relationship. Among these have been: (a) the wide dispersement and size variations of the employing units; (b) the heterogeneous composition and transient-occupational character of farm wage workers; (c) the large number of marginal farms in the industry; (d) the small average number of hired workers and the comparatively short employment duration during the year per employing unit; (e) the large proportion of seasonal workers in the hired labor force in agriculture; (f) the lack of job standards and general backwardness in the efficient utilization of labor; and (g) the weakness of labor organization even in the commercialized sectors of agriculture where the ratio of workers per employing unit is comparatively high. In turn, the absence of a standardized and equitable bargaining relationship has contributed materially to the worst features of the already complex agricultural wage structure and to the chaotic character of the farm labor market in general.

[49] See Samuel Liss, "Farm Habilitation Perspectives in the Postwar Period," *Journal of Farm Economics*, 29: 723–744 (August 1947).

Conceding the present vigor of these psychological and material forces tending to thwart the establishment of an orderly and rational system of wage determination in agriculture, it is pertinent to ask: Can an improvement in the wage-determining process in American agriculture be more quickly realized by bringing to bear a modest degree of public initiative and responsibility on this matter, with the hope that an elementary beginning may eventually encourage further endeavor along this line? That some action is both necessary and desirable is generally acknowledged. But it is also clear that current public opinion is not ready to go beyond a rudimentary start. It would seem to be realistic, therefore, to find a middle ground on which to lay at least the cornerstone for a systematic, equitable, and democratic wage- determination process in American agriculture.

It is submitted that the application of the prevailing wage as a minimum wage standard provides a base from which advances can be made to bring the buyer and seller of farm labor into a fair and stable bargaining relationship. Imperfect and tentative as was the system of determining prevailing wages under the Farm Labor Transportation Program, it contributed much to the orderly process of wage making by illuminating the wage structure in agriculture. By so doing it minimized the wage issue as a source of discontent, reduced labor turnover and labor pirating, and promoted fuller and more efficient utilization of agricultural manpower. Also, as demonstrated during the war, the prevailing wage standard can become a meaningful wage norm as many rates, even during a period of relative labor scarcity, are below prevailing levels because the farm labor market is competitively imperfect. In peace time, when farm labor is generally abundant, farm employers paying the prevailing rates are unable to absorb all qualified workers at those rates. As a result, many wage rates in such a period are also below the going scales.

By bringing the wage-resolving process in agriculture into the open and by publicizing the terms of farm employment a favorable atmosphere can be created in the farming community for the adoption of reasonably uniform minimum work standards in agriculture. Both actions would also stimulate the rationalization of the farm labor market and the promotion of an experienced and reliable hired labor force for which farm employers and the country as a whole have an urgent need.

The prevailing wage system during the war provided, finally, an indispensable experience for evaluating the essential administrative elements needed for its successful application to agriculture: (1) it must rest on a definite legislative basis or, where this is not readily attainable, it must be given an unambiguous administrative status based on executive authority; (2) it should provide for democratic participation of all the parties affected by the wage determination; (3) a series of criteria for ascertaining effective prevailing wages to serve as minima and for allowing flexibility in their application should be at hand; (4) properly trained-and-staffed wage-determining authorities should be established on such economic-geographical bases as would enable them to cope competently with the complexities of the wage structure in agriculture; (5) creation of regional bodies to review the findings of such authorities and of a national agricultural wage-advisory board, located in the proper executive agency of the Federal Government, to determine policy and to coordinate the operations of the system; and (6) sanctions, however mild, must be stipulated in the interest of enforcement.

# RECENT PROGRESS IN THE MECHANIZATION OF COTTON PRODUCTION IN THE UNITED STATES

GILBERT C. FITE

*Department of History, University of Oklahoma*

The application of machines to farm production has been one of the outstanding developments in American agriculture during the last century.[1] The results are to be seen in many aspects of American life. The use of machines has increased the efficiency of farm work and enlarged the acreage which each worker can cultivate. Millions of agricultural laborers have been freed to other industries, furnishing part of the vital labor supply for America's remarkable industrial expansion. Mechanization of the farm has helped to swell productivity far beyond the wildest dreams of early nineteenth-century Americans. More than this, it has lightened the burden and drudgery of farm labor, enhanced the income and raised the standard of living for thousands of rural people, and helped to supply cheap raw materials for the humming factories of the United States and Europe.

Some crops lend themselves to labor-saving machines more readily than others. Consequently there has been sporadic and uneven progress in eliminating hand labor in agriculture. Wheat production, for instance, has become completely mechanized while the Nation's cotton crop still requires many of the laborious hand techniques used centuries ago. Cyrus H. McCormick, Obed Hussey, John Deere, John F. Appleby, William Deering, and other farm machine pioneers were able to overcome the technical obstacles confronting mechanized grain harvesting, thereby opening the way to complete mechanization. On the other hand, Samuel S. Rembert, Jedediah Prescott, Theodore H. Price, and Angus Campbell were unsuccessful in doing the same thing for cotton.

During the last twenty-five years tremendous emphasis has been given to mechanizing the production and harvesting of the American cotton crop. Much of the impetus behind this development has been the belief that production costs could and must be lowered. The aim has been to make the cotton grower a more efficient producer. Lower costs of production have become necessary, and in the judgment of many mandatory, because of cotton's increasingly unfavorable competitive position. It has been argued that cotton growers, using traditional hand methods, are in no position to compete with a machine manufactured product like rayon or nylon. In 1942 the world's production of rayon was 3,473,000,000 pounds, which was equivalent to approximately 8,172,000 bales of cotton. United States production alone equaled about 1,700,000 bales. Since 1925, the output of rayon has steadily increased while the price per pound has declined sharply, thus making it a keen competitor. Paper is also competing with cotton on a limited basis.[2]

Furthermore, it is contended that only by lowering production costs through mechanization and heavier yields can the American producer hope to regain the position once held in world markets. Within the last quarter of a century foreign competition from India, Brazil, and Egypt has threatened the superior place of American cotton in world markets. The trend in foreign cotton acreage steadily advanced between the two World Wars, increasing from about 28,000,000 acres in 1913–14 to approximately 45,000,000 in 1942. The United States, on the other hand, grew over 34,000,000 acres in 1913–14 but only 22,602,000 by 1942.[3] In most foreign countries the production per acre is much below that of the United States, but with expanded acreage abroad and curtailed acreage at home foreign production exceeded that of the

[1] This article is an enlargement of a paper presented at the joint session of the Economic History Association and Mississippi Valley Historical Association at Madison, Wis., on Apr. 14, 1949.

[2] A special subcommittee of the House Committee on Agriculture recently made a useful study of the agricultural and economic problems of the Cotton Belt. 80 Congress, 1 session, House Committee on Agriculture, *Study of Agricultural and Economic Problems of the Cotton Belt; Hearings*, part 1, July 7 and 8, 1947, and part 2, Oct. 10, 1947. Hereafter, this report is cited as House Committee on Agriculture, *Study of Agricultural and Economic Problems of the Cotton Belt.* See also Frank J. Welch and D. Gray Miley, *Mechanization of the Cotton Harvest* (Mississippi Agricultural Experiment Station, *Bulletin 420*, State College, 1945), 7.

[3] U. S. Department of Agriculture, *Agricultural Statistics, 1947*, 74.

United States in 1934. Some idea of the precarious position of the American grower can be gained from the fact that in 1916 the United States produced 60 percent of the world's supply, and at the outbreak of World War II the Cotton South was producing only a little over 40 percent of the world's cotton.[4] Furthermore, between 1932–33 and 1938–39 foreign consumption of United States cotton dropped 46 percent. With labor and land costs relatively low in countries like Brazil and India, the American producer has found himself in an increasingly unfavorable competitive position. For instance, E. D. White of the United States Department of Agriculture, who visited the Nile Valley in 1948, reported that even though Egyptians were planting cotton by hand, they were doing it as cheaply as an American grower with his most efficient four-row tractor-mounted planter.[5]

Also uncertain and fluctuating prices, the general unprofitableness of cotton raising between 1926 and the outbreak of World War II, and a growing shortage of cheap labor in the South have been additional difficulties confronting cotton farmers in the United States. Partially to meet these problems, and in the hope of increasing their margin of profit, many growers have become enthusiastic over the possibilities of mechanization. The United States Department of Agriculture and the agricultural experiment stations in several Southern States have been active in promoting mechanization and in the development of machines adaptable to the cotton crop. Outstanding work in this regard has been done at the Texas Agricultural Experiment Station and at the Delta Branch Experiment Station, Stoneville, Mississippi. Farm machine manufacturers, too, have spent time and money developing new machines with an eye on a great untapped market. An important permissive factor in cotton mechanization has been the invention of better farm implements, along with the expansion of cotton culture into the semiarid sections of Texas and Oklahoma where extensive methods of cultivation could be easily applied.[6]

Cotton has been notoriously resistant to mechanization. This can be partially accounted for by the peculiar nature of the cotton plant and the specialized labor requirements during the growing season which have created mechanical and technical problems not found in wheat or corn. Furthermore, a shortage of labor, which has been so important in stimulating the use of labor-saving machines in American agriculture, generally has not been present in the cotton-growing regions. An adequate and cheap supply of Negro labor has resulted in relatively little pressure to mechanize. Also important is the fact that much of the Nation's cotton crop is produced on small, irregularly-shaped, rolling farms of less than 30 acres. In 1940, 54 percent of the cotton farms in the United States produced less than 4 bales each. Tractors and related machinery can not perform efficiently on a few acres and are thus not practical for the production of such small quantities. Tradition and custom, too, have been important factors in retarding mechanization of cotton production. And the sharecropper system with its small-farm unit of organization and stabilizing and conservative influences cannot be overlooked when considering the relative slowness of cotton mechanization.[7]

But in spite of these factors production of cotton with modern machines has increased at a rapid rate during the last twenty-five years. Since 1944 cotton has been grown and processed, from planting through harvesting, on a completely mechanized basis. If this is the meaning of cotton mechanization it already has been achieved on a very limited basis. This achievement, however, is the culmination of years of research and experimentation which has been characterized by discouragement and extremely slow progress.[8]

[4] *Ibid.*, *1940*, 115. By 1944 the United States was producing about one-half of the world's cotton, but production fell off again in 1945 and 1946.

[5] E. D. White, "The Economics of Cotton Mechanization," in the National Cotton Council of America, *Proceedings of the Second Annual Beltwide Cotton Mechanization Conference* (Memphis, 1948), 5. White declared (p. 4) that he was "indelibly" impressed with the importance of mechanizing cotton production in the United States if American producers were to compete successfully with cotton grown on cheap land and with low-priced labor in foreign countries.

[6] L. P. Gabbard and F. R. Jones, *Large-Scale Cotton Production in Texas* (Texas Agricultural Experiment Station, *Bulletin 362*, College Station, 1927), 7.

[7] House Committee on Agriculture, *Study of Agricultural and Economic Problems of the Cotton Belt*, part 1, p. 9. See also P. H. Stephens, "Mechanization of Cotton Farms," *Journal of Farm Economics*, 13:27–36 (January 1931). Mechanical harvesting has generally held the center of public attention, although it is only one phase of the whole mechanization process.

[8] Hopson Planting Company, *Mechanization of a Delta Cotton Plantation* (October 1944).

From 1841 to 1895 the man-labor requirements necessary to produce an acre of cotton were reduced about one-third, or from 148 to 102 hours. By 1930 the man-hours had been reduced to 71 in the Corpus Christi area and even lower in northwest Texas. During the ninety years prior to 1930 the man-hours necessary to grow an acre of cotton declined in some areas as much as 50 percent. The invention and adoption of better plows, planters, disks, and cultivators accounted for most of this advance. With the exception of a few areas, however, one and two-horse plows and planters, half-row and single-row cultivators, along with hand chopping, or thinning, and picking continued to characterize cotton production down through World War I. Considering the entire Cotton Belt, labor requirements dropped only slightly between 1895 and 1930.[9]

The major obstacle confronting mechanization of cotton production has been the extraordinary amount of hand labor necessary for chopping and picking. To apply machines successfully to these operations has perplexed many an ingenious inventor. Until these technical problems could be mastered, complete mechanization was impeded. Even with primitive one-mule half-row equipment a man can plant and cultivate more cotton than he can pick by hand. Consequently, there has been relatively little demand or use for two, three, or four-bottom plows or middlebusters, and two and four-row planters and cultivators. There was no economic advantage in adopting these labor-saving machines when hand labor had to be maintained on the plantation the year around to furnish an adequate working force for hoeing and picking. The sharecropper or tenant might as well be kept busy the rest of the season. Thus the planter tended to cling to simple equipment.

Furthermore, adequate and suitable power was not readily available until the 1920s. The 1920 census reveals that only about 1 percent of the farms in the eleven leading cotton States had tractors. Only 0.2 percent of the farms in Mississippi had them.[10] It was not until the introduction of the farmall general-purpose-type tractor in the middle twenties, with detachable specialized farming equipment, that tractors began to increase in popularity and use in the Cotton South. Cotton mechanization in Texas, for example, really began around 1925 when the first two-row farmall-type tractor was introduced in the Corpus Christi area. The efficiency of the first farmall tractors was limited since only horse-drawn machinery was available. But with the development of tractor-mounted middlebusters, planters, cultivators, and other equipment remarkable progress occurred in the mechanization of cotton.[11]

The percentage of general-purpose tractors increased very rapidly in the cotton States after 1925. In fact, the relative advance was greater than in the rest of the country. The most notable progress occurred after 1940. During the next five years the number of tractors in Arkansas, Mississippi, Alabama, North and South Carolina, and Georgia increased over 100 percent. The increase during the same period in Iowa was only 40.9 percent. But one should not be misled by these percentage figures. While there were 151,137 farms with tractors in Iowa in 1945, there were only 14,611 in Mississippi which had more but smaller farms. Of the approximately 2,000,000 tractors in the United States in 1945 the eleven southern cotton States had only 355,000.[12] Nonetheless, the increase in tractor power on cotton farms presages extended mechanization in cotton production. In three of Mississippi's heavy cotton-producing counties in the Delta, Sharkey, Tunica, and Washington, the number of tractors advanced from 504 in 1930 to 2,115 in 1945. There were 696 acres of cropland for each tractor in 1930, but by 1945 this had declined to 214 acres.[13]

[9] W. M. Hurst and L. M. Church, *Power and Machinery in Agriculture* (U. S. Department of Agriculture, *Miscellaneous Publication 157*, Washington, 1933), 4, 6. For information on the Dowlaw cotton planter, see S. Edwards Todd, "Improved Farm Implements," U. S. Department of Agriculture, *Report, 1866*, 263–264.

[10] U. S. Bureau of the Census, *United States Census of Agriculture: 1945*, 2:328.

[11] H. P. Smith and D. L. Jones, *Mechanized Production of Cotton in Texas* (Texas Agricultural Experiment Station, *Bulletin 704*, College Station, 1948), 5; and Harris P. Smith to the author, Dec. 30, 1948.

[12] U. S. Bureau of the Census, *United States Census of Agriculture: 1945*, 2:328. The percentage of farms reporting tractors increased between 1925 and 1945 as follows: North Carolina, 2.7 to 9.9; South Carolina, 1.5 to 7; Georgia, 1.5 to 9.1; Kentucky, 1.9 to 9.4; Tennessee, 1.8 to 9.3; Alabama, 1 to 6.6; Mississippi, 0.7 to 5.5; Arkansas, 1.2 to 9.4; Louisiana, 1.9 to 8.8; Oklahoma, 5 to 37; Texas, 3.2 to 34.1. The trends in tractor purchases in the South continued at an accelerated rate after World War II.

[13] Frank Welch, "Progress and Problems in Mechanization of Cotton and Related Crops in the Delta," in *Proceedings of the Second Annual Beltwide Cotton Mechanization Conference*, 68.

It should be emphasized, however, that a greater number of tractors in the cotton States does not automatically mean that they are being used in cotton production, since so far tractor power has been more widely used for other crops. This is particularly the case in Oklahoma and Texas. The United States Department of Agriculture found in 1922 that corn was the most important crop cultivated with tractors in Alabama, North Carolina, and Tennessee.[14] Considering the South as a whole, down to 1935 tractors were used most widely in producing feed crops.[15] It is interesting and perhaps significant to note that the first impetus to use tractors on Southern farms did not come from the belief that production costs would be lowered. Replies received by Department of Agriculture representatives in the early twenties from about 400 farmers indicated that less than 5 percent of those using tractors believed reduction in expense was important. In fact, many listed the cost of operation as the chief disadvantage.[16]

The adoption of mechanized power with accompanying machines has not been uniform throughout the Cotton Belt, and mechanization is currently in all stages of development. Mechanization has advanced furthest where climatic, topographic, and soil conditions are most favorable. Thus large-scale equipment has been applied most widely in the Arkansas-Mississippi-Yazoo Delta, the Coastal Plains of Texas, Northwest Texas and Southwest Oklahoma, and the San Joaquin Valley of California. In these areas fields are relatively large, the terrain is fairly level, and the land is free from stones, stumps, and other impediments. For example, in the Mississippi Delta over 75 percent of the cropland is operated in units of over 200 acres. The farms are large enough for efficient mechanical operation.[17] In the areas mentioned, and scattered localities elsewhere, tremendous progress has been made recently in applying machines to cotton production. Some plantations and cotton farms have become completely tractorized. By 1948 horsepower was almost extinct in the production of cotton in the San Joaquin Valley of California. Nearly all of the work was done with tractors except the hand labor used for chopping, irrigating, and picking; and the number of mechanical pickers is increasing rapidly.[18] The same thing is true of some Mississippi and Texas plantations. The Hopson Planting Company of Clarksdale, Mississippi, disposed of its 140 mules in the 1930s and became completely motorized by adding 22 tractors to its equipment. Later several mechanical cotton harvesters were purchased.[19]

It was in the late twenties that marked progress took place in both the Mississippi-Arkansas Delta and in Texas. The results of a survey by the Department of Agriculture in 1929 reveal the progress of mechanization in the Delta area. In 10 Mississippi and 9 Arkansas counties, where cotton made up about 75 percent of the crop acreage, 161 planters were interviewed. It was found that while tractor experience started in 1915 on the plantations surveyed, little increase occurred until 1927 when the general-purpose tractor came into wider use. It is significant that of the 98 tractor owners among the 161 planters, 50 of them were using a tractor for the first time in 1929. The greatest use of these machines was for flat disking and other drawbar work, and cultivating with two-

[14] H. R. Tolley and L. M. Church, *Tractors on Southern Farms* (U. S. Department of Agriculture, *Farmers' Bulletin 1278*, Washington, 1922), 5.

[15] U. S. Bureau of Agricultural Economics, *The World Cotton Situation* (Washington, 1936), part 2, p. 27.

[16] Tolley and Church, *Tractors on Southern Farms*, 6.

[17] Welch, "Progress and Problems in Mechanization of Cotton . . . ," 67.

[18] A. L. Fourchy, president of the Hotchkiss Estate Company, Firebaugh, Calif., to the author, Feb. 4, 1949. Within the last decade California has become one of the leading cotton-producing States, ranking fifth in 1948 when nearly 1,000,000 bales were harvested. Expansion has been so rapid since 1945 that it has gone largely unnoticed. Mechanization is in advanced stages. As one writer declared, the big-time operator "wouldn't know a mule from a boll wee[illegible]" However, hand labor is needed for irrigation, hoein[illegible]d picking. The number of mechanical pickers is increasing rapidly, and it has been estimated that 10 percent of the crop was mechanically harvested in 1948. Fields are sufficiently large to insure efficient mechanical cultivation; the average grower harvested 74 acres of cotton in 1947. See "California's Cotton Rush," *Fortune*, 39(5):85–89 (May 1949); and J. P. Fairbank, "Mechanization Problems of the West," in *Proceedings of the Second Annual Beltwide Cotton Mechanization Conference*, 71–74. For progress of mechanization in the Southeast, outside of the Mississippi Delta, see George B. Nutt, "Progress and Problems in Cotton Mechanization in the Southeast," in *ibid.*, 64–67; and E. C. Westbrook, *Modernizing Cotton Production in Georgia* (Georgia Agricultural Extension Service, *Bulletin 523*, Athens, June 1945).

[19] Hopson Planting Company, *Mechanization of a Delta Plantation*, 6.

row equipment. But a number of growers had adopted larger-scale methods and were using four-row detachable planters and cultivators.[20]

Similar developments were occurring in the Corpus Christi, San Angelo, and High Plains areas of Texas. By 1927 tractors with two and four-row equipment were making it possible for the average family to grow 200 or more acres of cotton as easily as a producer in much of the Eastern Cotton Belt could grow 25.[21] It was reported that nearly 90 percent of the equipment purchased in the Corpus Christi area in 1928–29 was of the four-row variety.[22] The general-purpose tractor met many of the objections of the earlier and heavier models. The newer machines were much more adaptable and had a greater variety of detachable equipment. They could be used for planting and cultivating as well as plowing and disking.

Also mechanical insecticide dusters were being used to spread calcium arsenate for boll weevil control. During the 1920s tractor-mounted and tractor-powered dusters were developed. In the areas where tractors were becoming more numerous these machines replaced the hand and saddle guns and one-mule spraying outfits. A few machines were fitted to cultivate and dust simultaneously, but they were not successful. The United States Department of Agriculture proved the practicality of airplane dusting in experiments at Tallulah, Louisiana, between 1922 and 1930. For maximum efficiency the fields needed to be fairly large and flat. Several corporations were formed after 1925 which provided farmers with commercial dusting. Most economical results occurred when farmers in a community pooled their acreages and made a contract with an airplane dusting firm. This technique held numerous advantages over any other dusting method. About 350 acres an hour could be dusted, and wet fields were no obstacle to operation.[23] But the small farmers, for the most part, continued to use hand or mule power for spreading insecticides.

By 1930 technical advance in tractors and related machinery such as plows, middlebusters, disks, planters, and cultivators had reached the point where extensive mechanization could be developed in cotton production, at least in certain areas, if the problems of mechanical thinning, weeding, and picking could be solved.

The invention of a successful mechanical cotton harvester has challenged inventors for nearly a century. The first patent on a cotton picker was granted to Samuel S. Rembert and Jedediah Prescott in September 1850.[24] This machine had picking cylinders and disks, and since that time the spindle-type picker has been experimented with more consistently than any other model. A wide variety of principles have been tested, however, and since 1850 between 800 and 900 patents have been issued on new or improved mechanical pickers. In 1886 a patent was granted on a thresher-type picker which cut the entire plant and attempted to thresh the cotton. It was a failure. The suction or pneumatic-type picker which was operated by attaching four or more flexible hoses to a suction fan aroused considerable attention between 1890 and 1925.[25] An operator held the mouth of the suction tube against the cotton boll and the lint was drawn from the burr. Thomas

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[20] L. A. Reynoldson and others, *Utilization and Cost of Power on Mississippi and Arkansas Delta Plantations* (U. S. Department of Agriculture, *Technical Bulletin 497*, Washington, 1935), 22. See also Lewis E. Long, *Farm Power in the Yazoo-Mississippi Delta* (Mississippi Agricultural Experiment Station, *Bulletin 295*, State College, 1931).

[21] Gabbard and Jones, *Large-Scale Cotton Production in Texas*, 5–24.

[22] F. R. Jones, "Reducing Cotton Production Costs by the Utilization of Improved Machinery," in *Agricultural Engineering*, 10:183–188 (June 1929). In 1930 a survey revealed that out of 140 reporting farms in the Texas High Plains, 31 were using two-row tractor equipment. By 1935, 8, or about one-fourth, of these had switched to four-row implements. U. S. Bureau of Agricultural Economics, *The World Cotton Situation*, part 2, p. 28.

[23] Elmer Johnson and others, *Cotton-Dusting Machinery* (U. S. Department of Agriculture, *Farmers' Bulletin 1319*, Washington, 1923), 3; and R. C. Gaines and D. A. Isler, *Machinery for Dusting Cotton* (U. S. Department of Agriculture, *Farmers' Bulletin 1729*, Washington, 1934).

[24] U. S. Commissioner of Patents, *Report, 1850*, part 1, *Arts and Manufactures*, 233–234. See the account of Frank J. Welch and D. Gray Miley, "Mechanization of Cotton Harvest," *Journal of Farm Economics*, 27:928–946 (November 1945).

[25] H. P. Smith and others, *The Mechanical Harvesting of Cotton* (Texas Agricultural Experiment Station, *Bulletin 452*, College Station, 1932). In this bulletin the authors trace much of the history of mechanical cotton picking, with special emphasis upon stripper harvesting experiments. Also included is a list of patents issued on cotton harvesters from 1850 to 1932.

B. Hyde of Taylor, Texas, who invented such an octopus-appearing contraption in the early 1890s claimed each picking tube could pick 1,000 pounds of seed cotton a day in the hands of a skilled operator. It was said that with four tubes 4,000 pounds could be harvested in 10 hours.[26] But such optimism was premature, and the machines proved impractical, although experiments with them continued well into the 1920s. Hand labor was not eliminated and the suction tubes gathered much more trash and debris than a hand picker.

As early as 1868 a vain effort was made to design a machine which would blow cotton from the burr. The same year Robert F. Cook of Brooklyn, New York, obtained a patent on an electrical picker, and although experiments on this type machine continued until the early 1920s, it, too, was unsuccessful.[27]

The idea of stripping cotton from the stalk, burr and all, resulted in the invention of a stripper-type harvester in the early 1870s. However, little attempt was made to apply this method of cotton harvesting until 1914 and it did not become widespread until 1926 when the stripper was used quite extensively in areas of Texas. The stripper- and spindle-type pickers have received the greatest attention and were coming into more general use in the 1940s.

At the same time the problem of thinning cotton with machines was receiving attention. In the 1890s several mechanical mule-drawn combination choppers and cultivators were invented, but they were not sufficiently successful to warrant commercial manufacture.[28]

Cotton was first harvested mechanically on a commercial scale in Northwest Texas in 1926. The farmers had the largest crop on record, labor was scarce and expensive, and prices were low. These conditions called for cheap harvesting. Farmers and local blacksmiths built what they called "sleds," more properly strippers. These simple devices, consisting of a box or platform on runners with a V-shaped front, were pulled along the row, and the ripe and unripened bolls were stripped off.[29] The harvesting was done after frost when the cotton plants had shed their leaves. About 4 or 5 acres a day could be picked in this manner at about $2.78 a bale. In the Lubbock area the outfits cost only $9 to $27 each.[30] The practicality of these crude harvesters increased as the gins inaugurated improvements to clean stripped cotton. Sleds had been used in parts of Texas on a very limited basis as early as 1914, but the experience in 1926 marked a turning point in stripper harvesting. Only a few sleds were operated between 1914 and 1926, mostly in 1919 and 1920.

During this time the farm machine manufacturers demonstrated practically no interest in producing a commercial stripper. Shortly after 1926, however, Deere and Company and other firms, as well as individuals and the Texas Agricultural Experiment Station, began experimenting with improved and more refined machines, both horse-drawn and tractor-mounted. Agricultural engineers at the Agricultural and Mechanical College of Texas made especially valuable contributions. In 1930 Deere and Company manufactured 50 mule-drawn strippers and 5 one-row and 5 two-row tractor-mounted machines. Some of these outfits were placed on the market in 1931 at $185 each. They were designed to strip about 100 acres a season.[31] By 1932 Deere and Company was producing 500 strippers a year, but the depression with its cheap labor and lack of cash discouraged sales and production halted. In fact, all phases of cotton mechanization were retarded by the depression beginning in 1929. The cost of farm power showed a marked drop in the following four years, but the

[26] "An Improved Cotton Picker," *Scientific American*, 67:291 (Nov. 5, 1892). In 1918 a small amount of cotton was picked in California's Imperial Valley with a machine of this type. See "Vacuum-Picked Cotton," *Literary Digest*, 59(6):23 (Nov. 9, 1918).

[27] Smith and others, *The Mechanical Harvesting of Cotton*. In 1922, after 14 years of experimentation, L. C. Stuckenborg of Memphis developed an electrical picker which received considerable publicity. Brushes at the end of a suction tube revolved inwardly and pulled the cotton from the burr. Smith pointed out that cotton fiber is not amply drawn to electrically charged brushes or belts to make this type of machine practical. On Stuckenborg's activities, see "The Successful Cotton Picker," *Scientific American*, 126:179 (March 1922).

[28] "A Combined Cotton Chopper and Cultivator," *Scientific American*, 62:100 (Feb. 15, 1890); and "A Cotton Chopper and Cultivator," in *ibid.*, 64:57 (Jan. 24, 1891).

[29] Smith and others, *The Mechanical Harvesting of Cotton*, 14. See also D. L. Jones and others, *Mechanical Harvesting of Cotton in Northwest Texas* (Texas Agricultural Experiment Station, *Circular 52*, College Station, 1928), 5–17.

[30] Gabbard and Jones, *Large-Scale Cotton Production in Texas*, 21.

[31] Leonard Neighbour, "Progress in the Mechanical Stripping of Cotton," in *Proceedings of the Second Annual Beltwide Cotton Mechanization Conference*, 74–76.

greatest decline occurred in the price of mule feed and hand labor. From 1929 to October 1931, mule-power costs fell approximately 50 percent, but tractor costs dropped only 20 percent.[32] Not only did machine costs remain relatively high but there was considerable public opposition to mechanical harvesters of any kind because they deprived jobs to unemployed hand pickers. Deere and Company sold practically no strippers from 1932 to 1942. Local dealers had them on hand and finally in 1941 sold the horse-drawn machines for $15.

Commercial production began again after 1941 when scarcity of workers caused a demand for mechanized harvesting. By 1948 there were approximately 6,000 of these machines operating, mostly in Texas and southwestern Oklahoma. Deere and Company became the leading manufacturer with a production of 4,187 from 1946 to 1948.[33] Some strippers have been used in sections of the Piedmont and Sandhills of the Coastal Plains, and they have been tried in nearly every cotton State. But they are most successful where the cotton plant is small and has a minimum of foliage. It has been estimated that about 15 percent of the cotton in the Lubbock, Texas, area was stripped in 1947. This was the greatest extent to which strippers have been used up to that time.[34]

From 1850 to 1890 little significant progress was made toward marketing a spindle-type picker, but during the next fifty years considerable advance was made in developing a successful and practical machine of this design. In the nineties Angus Campbell, who was associated with the Deering Harvester Company, worked out the mechanical principles for such a picker. Shortly before 1912 he and Theodore H. Price built the Price-Campbell harvester for experimental picking. This outfit did a poor job, leaving too much cotton unpicked and on the ground, as well as damaging the unripened bolls.[35] Other mechanical harvesters were built during this period, including one by John F. Appleby who gained repute by inventing the knotter for grain binders.[36] The International Harvester Company, which has achieved pre-eminence in building spindle-type pickers, did not begin experiments with this model until 1924. In that year the company acquired all rights to the Price-Campbell machine and built one on that plan.[37] After 1924 the International Harvester Company, along with individual inventors like John and Mack Rust, experimented consistently with mechanical harvesters, finally perfecting a few one-row high drum pickers for commercial sale in 1941.[38]

Because of the war only about 100 of these machines were produced and sold between 1941 and 1943. Since 1945, however, production has steadily mounted, and the company manufactured over 1,100 pickers at its Memphis plant in 1948.[39] By that time there were between 1,500 and 2,000 pickers on cotton farms in the United States. The majority of them were in the Mississippi Delta and California. There were over 1,000 spindle-type pickers in the Delta and between 350 and 400 in California, mostly in the San Joaquin Valley.[40]

[32] Reynoldson and others, *Utilization and Cost of Power on Mississippi and Arkansas Delta Plantations*, 43. The price of a selected list of agricultural implements dropped only 6 percent between 1929 and 1933. On the other hand, the farm price of cotton fell from slightly under 18 cents a pound in 1929 to 8.8 cents four years later, or a drop of over 100 percent. This illustrates the comparative rigidity of industrial prices compared to those of agriculture. The production drop in agricultural implements was 80 percent during the period from 1929 to 1933. 74 Congress, 1 Session, *Senate Executive Document 13, Industrial Prices and Their Relative Inflexibility*, 8.

[33] R. M. Merrill of Deere and Company to the author, Dec. 28, 1948. On this company's early experiences with strippers, see Neighbour, "Progress in the Mechanical Stripping of Cotton," 74–76.

[34] R. D. Lewis, "Challenges in the Mechanization of Cotton and Related Crops to the Agricultural Experiment Stations," *Proceedings of the Second Annual Beltwide Cotton Mechanization Conference*, 44. Harris P. Smith estimated that between 150,000 and 200,000 bales were stripped in Northwest Texas in 1947. Smith to the author, Dec. 30, 1948.

[35] Price and Campbell were only two of the many patentees during the 1890s and early 1900s. Price received a patent on a spindle-type picker in 1904. See Smith and others, *The Mechanical Harvesting of Cotton*, 6–7.

[36] *Ibid.*, 7–8.

[37] The International Harvester Company built three suction-type pickers in 1922, but the experiments were soon abandoned. Officials of the company felt that hand labor must be eliminated entirely.

[38] R. C. Archer, "Progress in the Mechanical Picking of Cotton," *Proceedings of the Second Annual Beltwide Cotton Mechanization Conference*, 80 ff. C. M. Mitchell, an official of the International Harvester Company, to the author, Jan. 6, 1949.

[39] C. W. Mitchell to the author, Jan. 6, 1949.

[40] J. P. Fairbank, agricultural engineer at the University of California at Davis, estimated the number at about 400, while A. L. Fourchy, president of the Hotch-

Other States had a few pickers. Harris P. Smith, agricultural engineer at the Agricultural and Mechanical College of Texas, estimated that between 50 and 60 pickers operated in Texas during the 1948 season.[41] There were around 40 machines in Arizona, 80 in Louisiana, and a few in other States.[42] Cotton authorities estimate that about 5 percent of the Nation's crop was harvested mechanically in 1948, either by stripper or spindle-type pickers.[43] Mechanical harvesting, while in its infancy in 1948, seemed on the threshold of tremendous expansion. An important contributory factor is the development of cotton plants which lend themselves more readily to machine picking. Not to be overlooked, too, is the progress made in defoliation. Calcium cyanamid, in some cases spread by airplanes, is being used to rid the cotton plants of their leaves prematurely. This is a great boon to mechanical picking, since it causes the bolls to mature earlier and more uniformly, and reduces the "green-leaf trash" in mechanically picked cotton.[44]

One of the greatest bottlenecks to complete mechanization, outside of the Texas High Plains and Southwest Oklahoma, is weed and grass control. In 1947, for instance, the Delta Branch Experiment Station produced cotton with only 39 man-hours per acre, but control of grass and weeds took 33 of that total.[45] Particularly during wet seasons no machines have been developed to handle this problem. It is being attacked in various ways. Intensive experiments have been carried on with flame weeders, and they have proved highly successful under some conditions. Check or hill planting and cross plowing have been found practical in some areas as a means of eliminating hand labor. Where it is necessary to drill cotton in order to get the desired stand, mechanical or flame choppers have been used. The so-called Dixie chopper, a two-row tractor-drawn implement, the one-row Finklea, as well as the flame chopper have been successful under proper conditions. However, these machines are little beyond the experimental stage as yet and are not used to any extent over the Cotton Belt.[46] Judging from the progress made in the last ten years, there is every reason to believe that agricultural engineers will soon solve the remaining problems of mechanical weeding and thinning.

Many contemporary agricultural leaders are calling mechanization a "must." Inefficient production methods and low yields, they argue, are mainly responsible for the low average income of Southern farmers.[47] Mechanization is only one phase of more efficient cotton production, but it is a very important one. As previously pointed out, the number of man-hours necessary to grow and harvest an acre of cotton by hand and mule methods is excessive, thereby contributing to the low income per worker. Machine production can modify this situation to a considerable degree. For instance, in recent years the man-hours required to produce and harvest an acre of cotton have been reduced to as low as 6 in the High Plains of Texas where four-row equipment and mechanical strippers were used. In contrast, the production and harvesting of an acre of cotton with one-row mule equipment and hand hoeing and picking took about 150 man hours.[48]

The desired objective of lowering costs through machine production has been achieved by many operators. As early as 1926 it was figured that labor and power costs in the growing operations alone on a 200-acre farm in the Corpus Christi

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kiss Estate Company at Firebaugh, thought 350 was a close figure. J. P. Fairbank to the author, Feb. 1, 1949; and A. L. Fourchy to the author, Feb. 4, 1949.

[41] Harris P. Smith to the author, Dec. 30, 1948.

[42] Harold C. Schwalen to the author, Feb. 9, 1949; and E. B. Doran to the author, Jan. 26, 1949. Schwalen and Doran head the departments of agricultural engineering at the University of Arizona and Louisiana State University respectively.

[43] Claude L. Welch, "Progress in Cotton Mechanization Since 1947," *Proceedings of the Second Annual Beltwide Cotton Mechanization Conference*, 11.

[44] Consult Harris P. Smith, "Late Developments in Mechanical Cotton Harvesting," *Agricultural Engineering*, 27:321–322 (July 1946).

[45] Welch, "Progress and Problems in Mechanization of Cotton . . . ," 69. See also Carl B. Danielson and Grady B. Crowe, "Flame Cultivation Studied as Means of Weed Control," *Mississippi Farm Research*, 11(10):1, 6–7 (October 1948).

[46] J. E. Adams and P. W. Gull, "Mechanical Production of Cotton in the Yazoo-Mississippi Delta," *Better Crops With Plant Food*, 30(9):6–10, 44–47 (November 1946).

[47] See the address of M. J. Funchess, dean of the School of Agriculture, Alabama Polytechnic Institute, "Farm Problems of the Cotton Belt," in *ibid.*, 32(4): 9–14, 44–46 (April 1948).

[48] House Committee on Agriculture, *Study of Agricultural and Economic Problems of the Cotton Belt*, part 2, p. 25.

area was $1,504.84 for mules or horses and only $653.34 where tractor power was utilized.[49] Definite savings were realized, too, in stripper harvesting, even though the stripped cotton was one or two grades below that picked by hand. The Hopson Planting Company reports sizable savings from the use of spindle-type pickers on their vast Delta acreages.

Although some definite benefits accrue from mechanization, it should be emphasized that the economic advantages are limited. As one scholar has pointed out, although bigger units and large-scale production methods will raise efficiency, this is apt to increase production and lower prices.[50] It was found in Oklahoma, for example, that a substantial number of farmers who bought strippers after 1946 planned to increase their cotton acreage because of the ease of harvesting a larger crop. This is particularly significant since the State's acreage as a whole was declining.[51] Making the cotton grower more efficient will not protect him against overproduction and the ill-fated fluctuations of cotton prices. But in any event, cotton's competitive position should be aided to some degree by any factors which contribute to cheaper production. At least mechanization is one attack on the cotton problem and an approach which offers definite possibilities. It should be recognized that those planters who are able to mechanize and lower their costs first will benefit most from any gains made. At the same time the areas which find it difficult to adopt new production methods will likely suffer from internal competition. Some economists have suggested that this economic pressure from the heavier and cheaper producing regions may force farmers on the small hilly farms of the Southeast to grow more of other crops and livestock.

As yet, the cost of mechanization poses a real problem and is prohibitive for most cotton farmers. Considering machinery at 1947 prices, it has been estimated that nearly $50 an acre in the Delta and about $35 in Mississippi's Clay Hills and the Piedmont of North Carolina would be necessary to mechanize those farms.[52] Cost is an especially important item in regard to the picker. The International Harvester Company's picker, the only practical machine for the Southeast and the Far West, cost $5,985 f.o.b. factory in 1948. Mounted on a farmall "M" tractor the total was $7,600.[53] This is an astronomical sum for over half of the cotton growers who produce less than 4 bales of cotton a year and farm less than 30 acres of cropland. Capital investment is a less important obstacle in the Texas High Plains and Southwest Oklahoma, and a few other areas where the stripper is practical. The John Deere stripper sold in Sherman, Texas, in 1948 for $905.[54] With machine costs so high it seems doubtful if any but the larger operators can reap a substantial economic advantage from mechanization. Custom harvesting offers one solution for meeting the heavy capital outlay for a picker, although it has not developed extensively as yet. A lack of machines and the fact that cotton must generally be picked more than once have impeded custom picking. But in Oklahoma over half of the stripper owners interviewed did some custom harvesting in 1948.[55]

Because of the expense of mechanization and the fact that most machines can operate more effectively on larger acreages, agricultural economists and engineers are advocating the enlargement of farm units. Some proponents of this program have suggested that smaller farms be reorganized and consolidated to such an extent that the number of farm workers in the South be reduced 31 percent below the 1943 figure.[56] Unless it proceeded very gradually, such a drastic program would be bound to leave deep sociological scars and force difficult social and economic readjustments. At the same time, however, it would undoubtedly raise the standard of living for the remaining farm population. If this is one of the major adjustments which is necessary to bring the cotton farmers of the South—as well as other farmers—a higher living

[49] Gabbard and Jones, *Large-Scale Cotton Production in Texas*, 20.

[50] Rupert B. Vance, *Human Factors in Cotton Culture* (Chapel Hill, 1929), 317–318.

[51] John B. Campbell, *Oklahoma Farmers' Experiences with Cotton Strippers* (Oklahoma Agricultural Experiment Station, *Bulletin B-324*, Stillwater, 1948), 8.

[52] House Committee on Agriculture, *Study of Agricultural and Economic Problems of the Cotton Belt*, 22.

[53] C. W. Mitchell to the author, Jan. 6, 1949. Allis-Chalmers built a few spindle-type pickers in 1948 which appeared to be quite satisfactory in test runs. They were two-row pickers and considerably lighter than the International Harvester Company machine.

[54] R. M. Merrill of Deere and Company to the author, Dec. 28, 1948.

[55] Campbell, *Oklahoma Farmers' Experiences with Cotton Strippers*, 9.

[56] House Committee on Agriculture, *Study of Agricultural and Economic Problems of the Cotton Belt*, 22.

standard, the displaced population will have to be taken care of by a fuller utilization of Southern industrial resources.

Sociologists and others have become agitated over the likelihood of technological unemployment in the Cotton Belt. This has occurred to a limited degree already and is a distinct possibility when mechanization becomes more widespread. But, by and large, no serious labor displacement has been caused by the use of modern cotton production equipment. In most cases labor had already deserted the cotton fields and was no longer available in customary quantity so, where possible, the growers turned to mechanization. Machines have been adopted most readily when hand labor was scarce or relatively expensive. Oscar Johnston of Scott, Mississippi, manager of the largest cotton plantation in the United States, declared in 1947: "Mechanization is not the cause, but the result, of economic change in the area. Most if not all of the migration of farmers and farm workers which has taken place during the past few years has resulted from factors other than mechanization itself. All over the South, tenant houses now stand vacant on farms where mechanization has not yet achieved considerable development." From 1935 to 1944 there were about 850 tenant families on Johnston's plantation, but by 1947 the number had dropped to 525. More than 300 tenants had gone never to return.[57] The movement away from the farms has been a major factor in stimulating mechanization of the cotton fields. Since the farm population of the South is declining and since mechanization is progressing in a slow evolutionary manner, labor displacement does not seem to be a serious problem at the present time.[58]

In conclusion, it seems clear that, although mechanical cotton production is in advanced stages in some sections, most of the old Cotton Belt scarcely has been touched by modern machines. For example, Professor F. A. Kummer, head of agricultural engineering at Alabama Polytechnic Institute, has stated that in Alabama "most of these machines are still in the development stage and . . . have as yet not found widespread acceptance by our farmers."[59] Mechanization has come slowly and then only in limited areas. Even the invention and manufacture of a successful mechanical picker has not revolutionized the cotton industry as so many predicted. There is little likelihood that mechanization will shortly sweep the entire Cotton Belt. As already shown, the cost is still prohibitive for most farmers. Before anywhere near complete mechanization can be achieved more small and cheaper machines adaptable to small rolling farms must be put on the market. And credit must be made available with which to buy this equipment. It is almost certain, however, that with the combining of holdings and the manufacture of cheaper machines suitable for the small farms which make up much of the Cotton Belt, mechanical cultivation will invade the area more extensively. Pressure to mechanize is steadily increasing. Machine production is making cheaper cotton possible, but by no means furnishes a cure-all for cotton producers. To repeat, mechanizing the cotton fields is only attacking part of the problem of contemporary Southern agriculture.

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[57] Oscar Johnston, "Will the Machine Ruin the South?" *Saturday Evening Post*, 219 (48):36–37, 94–95, 98 (May 31, 1947). See also Chester Davis, "The Challenge of Farm Mechanization to Farm Credit," *Proceedings of the Second Annual Beltwide Cotton Mechanization Conference*, 48.

[58] There was an estimated 20 percent decrease in farm population in 14 Southern States between 1940 and 1944. One group of authorities has concluded that the full impact of technological advance in the Cotton Belt would displace 2,150,000 agricultural workers by 1965. A high degree of speculation enters into the most accurate estimate because of the many variable factors. See House Committee on Agriculture, *Study of Agricultural and Economic Problems of the Cotton Belt*, 45, 565.

[59] F. A. Kummer to the author, Jan. 18, 1949.

# AGRICULTURE IN LUCE COUNTY, MICHIGAN, 1880 TO 1930

## A Study of Agricultural Development in the Upper Great Lakes Region

GEORGE F. DEASY

*Division of Geography, Pennsylvania State College*

The years from 1880 to 1930 witnessed invasion and subjugation of the land in the Upper Peninsula of Michigan by white man. The initial conquest was primarily by miner and woodsman, but concomitantly there appeared a sprinkling of farmers who took over territories vacated by exploiters of forest and mineral wealth and put them to useful purpose. It is with the work and problems of such pioneer farmers and their successors in Luce County (Figure 1), a small part of Upper Michigan, that this article is concerned.

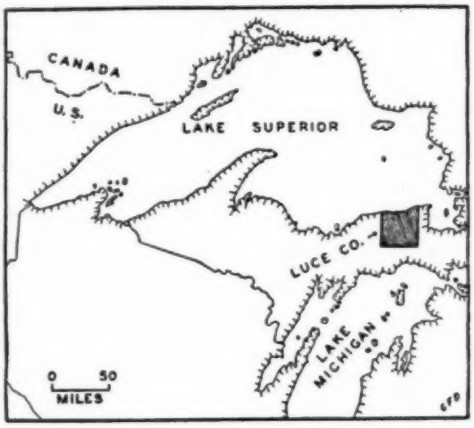


FIGURE 1. Luce County, Michigan

*The Indian and Agriculture.* There is no direct evidence of agriculture in the Indian life of Luce County prior to the white man's arrival, but inference would indicate that cultivated crops played only a minor role as a source of food for the aborigines.

Corn, the most significant crop known to the aborigines, was relatively unsuited to the cool summer weather, short growing season, and excessively wet or droughty soils that characterize so much of Luce County, although grown in considerable quantity in the Lower Peninsula. Tobacco had to be imported from lands to the south, and nothing was known of potatoes. Furthermore, the almost continuous cover of dense forest was a deterrent to cropping for a people equipped solely with stone axes, flint blades, and soft copper cutting tools and lacking draft animals. Only by girdling a few trees or happening upon a fortuitous windfall or burn in the forest could an area be won for planting corn. At best, therefore, only an infinitesimal fraction of the total potential cropland in Luce County could possibly have been cleared for agriculture by the sparse Indian population. Instead, the Indians subsisted very largely upon game, fish, nuts, berries, and maple syrup.[1]

*Agriculture and the Coming of the White Man.* The arrival of early Europeans in Luce County not only failed to stimulate farming but actually caused a decline in what little agriculture may formerly have been practiced, for the voyageurs were not interested in establishing permanent homes on the land.[2] By offering heretofore unheard-of rewards to the Indians for furs, the traders undoubtedly enticed from meager-yielding croplands the few Indians who previously had engaged in agriculture and impelled them into the woods after more remunerative fur-yielding game.

Even the arrival of the lumberman in Luce County during the latter half of the nineteenth century did little to foster agriculture. Attracted by valuable and accessible virgin pine forests in the northern sand plains, camps were established and large tracts were cleared. Despite fairly remunerative markets for food in logging camps, and large areas of cleared land, practically no farming developed in the northern part of the county. The sterile sand plains failed to yield profitable harvests, and lumbermen were forced to depend upon imported food brought by lake vessels from points farther south.[3]

[1] Wilbert B. Hinsdale, *Distribution of the Aboriginal Population in Michigan* (Ann Arbor, 1932), 9, 22, 25, and *passim*.

[2] I. A. Johnson, *The Michigan Fur Trade* (Lansing, 1919), *passim*.

[3] The dependence of northern Luce County upon outside sources of food continued during the entire period of lumbering in the area, for the cutover sand plains have never been cropped. *Newberry News*, Aug. 8, 1890, and Nov. 23, 1900.

*The Beginnings of Modern Agriculture.* Modern agriculture in Luce County began with the construction in 1881 of the Detroit, Mackinac, and Marquette Railroad (now the Duluth, South Shore, and Atlantic Railroad) along the edge of the fertile soils belt in the southern part of the county. Almost immediately a sizeable market for agricultural products developed among the villages and lumber camps that sprang up. Of equal importance was the fact that hardwood lumbering activities led to clearing of relatively large areas of fertile loamy soils.[4] In contrast, the fast and reliable transportation provided by the railroad for perishable food products, that could be grown in quantities exceeding local demands, was at first of little importance.

Statistics from the United States Census of Agriculture for 1890, as well as items from issues of the *Newberry News* for the period June 5, 1890 through January 16, 1891 give some indication of the extent and character of the farming that had developed within a few short years after construction of the railroad (Figure 2). Fifty-five farms, averaging 153 acres each, had a total of 8,440 acres of which 1,614 acres were improved. From news items in the newspaper, making frequent mention of farmers and farming in Lakefield and Pentland townships, near McMillan and Newberry villages and in the vicinity of Round (North Manistique) Lake,[5] it would appear that practically all the early farms were in the southern part of the county, in the fertile soils belt south of the railroad (Figure 3). However, specific mention is made of at least one farm north of Newberry.[6]

Twenty-five farms ranged between 100 and 500 acres in size, while 19 more included from 50 to 100 acres each. Some 10 farms had less than 50 acres each while one exceeded 1,000 acres. It must be remembered, however, that an average of only one-fifth the acreage of each farm was improved, the remainder being largely woodland. Such a large percentage of uncleared land reflected not only pioneer conditions but also the considerable cost in time, labor, and money necessary to clear the heavily forested land. It was optimistically believed that practically all the land incorporated in farms would be cleared in due time.

The census data for 1890 show three crops to be of outstanding importance in the county. Hay, so well adapted to the cool moist summer days, the short growing season, and the relatively infertile soils of the area, occupied 525 acres, or roughly one-third the total amount of improved land. Oats and potatoes, ranking second and third in importance respectively, were likewise suited to the prevailing climatic and soil conditions of the region. They occupied 244 and 127 acres. Minor crops included barley (14 acres), wheat (11 acres), Canadian peas (about 7 acres), and corn (7 acres).

Apparently the early farmers were aware of the limitations that nature imposed upon crop types and did not attempt planting such standard crops as wheat and corn in large quantities. In part, such canny adjustment to environment may have been influenced by the miserable failure, some years previous, of settlers in the Lower Peninsula in their efforts to carry on typical corn-belt agriculture in the North Woods. Also effective must have been the fact that many of the early farmers in Luce County had immigrated there from countries like Canada, Ireland, Scandinavia, and Finland where somewhat analogous conditions of summer temperatures and length of growing season had demonstrated what crops were best to grow. Hope springs eternal in the human breast, however, and at least one farmer in 1890 was experimenting with six different varieties of corn in an attempt to find one that could be grown successfully in the area.[7]

In addition to the field crops enumerated above, orchards and truck crops occupied small areas in 1890. Some 2,273 apple trees, best suited of all fruits to the rigorous climate of the region, formed the backbone of the orchard industry. Practically all trees were planted on small tracts by individual farmers, and the fruit was for home use or for sale to nearby villages and lumber camps. No commercial production was attempted. Efforts were made to grow other kinds of fruit trees, such as plum and cherry, but winter killing of trees and destruction of flowers and fruit by late spring frosts were frequent. Truck crops for local consumption included strawberries, beets, carrots, cucumbers,

[4] All farm land purchased by settlers was not cleared previously by lumbering companies, however. In many cases tracts of virgin hardwoods were obtained by homesteaders and partly cleared by them before farming operations were begun. For references to this procedure, see the *Newberry News*, Aug. 15 and Sept. 15, 1890.

[5] *Ibid.*, June 13, July 4, 11, Aug. 8, 15, 29, Sept. 5, 26, Oct. 10, Nov. 7, Dec. 26, 1890.

[6] *Ibid.*, Oct. 3, 1890.

[7] *Ibid.*, Aug. 15, 1890.

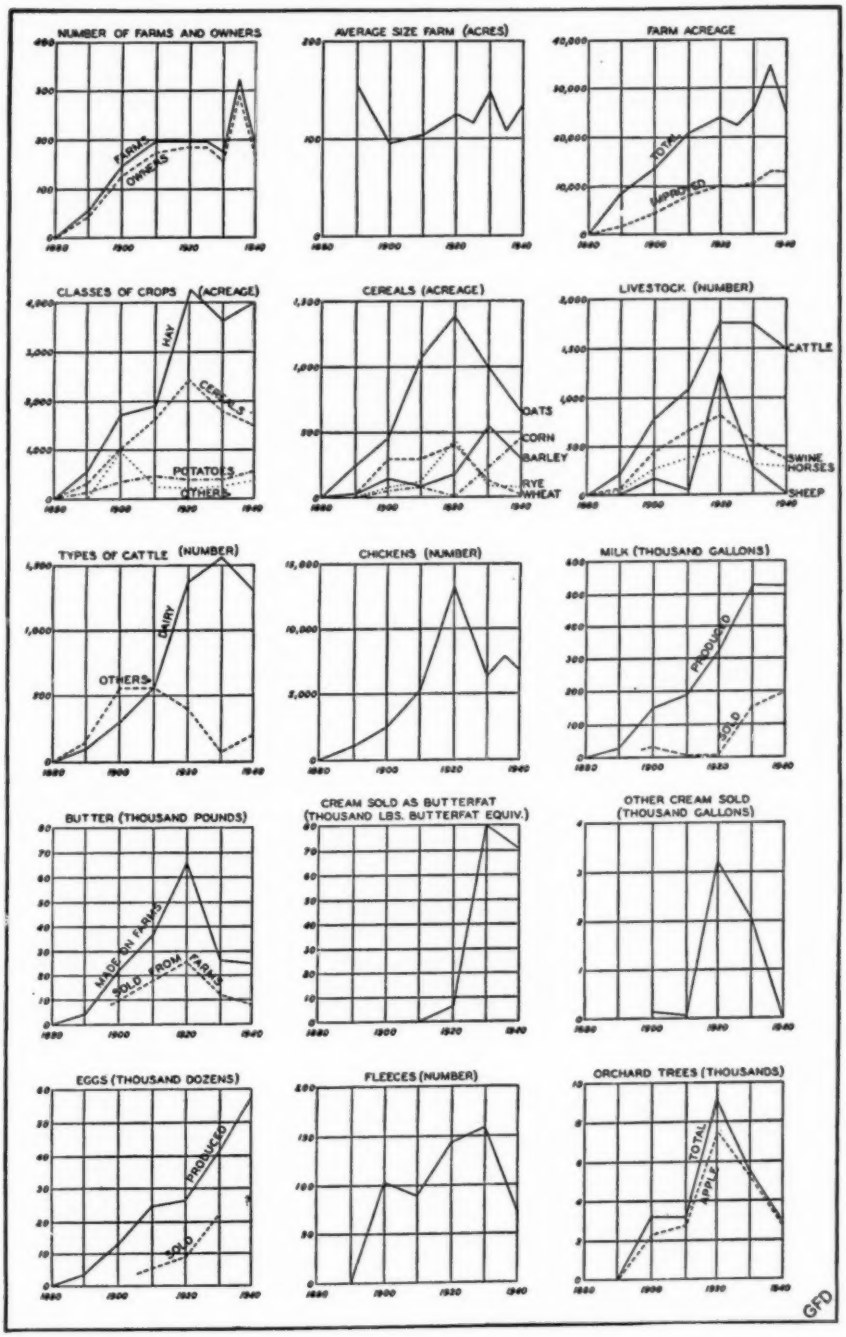


FIGURE 2. Trends in the major aspects of agriculture since its inception in Luce County. The term "farm owners" includes both full and part owners. "Improved" farm acreage consists of plowed cropland, fallow cropland, and nonwoodland pasture. A few minor cereals are not included in the "cereals" graph, while the "livestock" graph does not include fowl. The "livestock," "cattle," and "chickens" graphs each include animals of all ages. Minor fowl (turkeys, geese, ducks) are omitted from the "chickens" graph. Data on "fleeces" and on "types of cattle" are approximate for 1940. There are no data on the number of eggs sold in 1900 and 1940, nor on "other cream sold" in 1940. *Source:* U. S. Bureau of the Census decennial reports for 1880–1940.

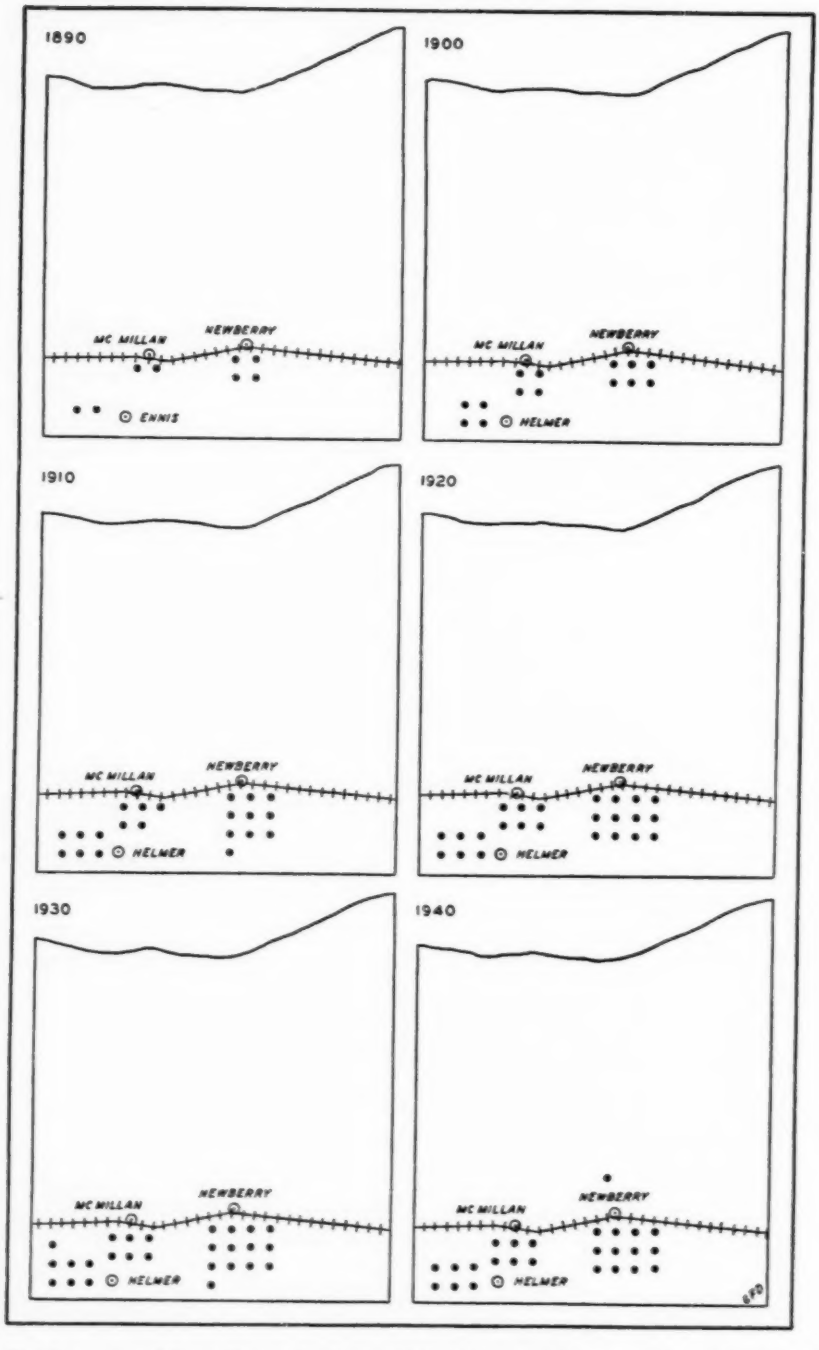


FIGURE 3. Total acreage of Luce County in farms, 1890–1940. Each dot represents 1,000 acres or a major fraction thereof. The location of the dots is only approximately correct and is based on general impressions from a study of appropriate issues of the *Newberry News* and conversations with residents of the county, rather than on exact data concerning the distribution of farm acreage.

pumpkins, squash, beans, and green corn.[8] Apparently the folk of Luce County fared well in their diet during those early days!

Special mention needs be made of the celery crop of Luce County. As early as 1890, less than a decade after the beginnings of modern agriculture in this peripheral part of the United States, a commercial celery-growing company, the Newberry Celery and Improvement Company, Ltd., established the industry. The concern cleared a few acres of marshland just east of Newberry and planted some 200,000 celery plants annually.[9] It hoped to develop an industry that would rival that of the great celery-growing center near Kalamazoo in Lower Michigan.[10] Enthusiasm for the new project ran high in the community, and according to the June 27, 1890 issue of the *Newberry News*, "it is only a question of a short time when our celery industry will become one of the greatest in the world!" Unfortunately, subsequent results did not support this and similar over-optimistic statements!

With the small but highly monopolistic and relatively affluent markets for food products afforded by the booming lumber towns and camps of southern Luce County, the local farmers naturally converted much of their low-value crops, such as hay, oats, and potatoes, into more remunerative and saleable animal products. Livestock phases of farming were relatively well advanced, therefore. Some 237 cattle, including 88 dairy cattle, produced 28,295 gallons of milk and 4,921 pounds of butter and furnished considerable quantities of beef. In addition the meat supply of the area was augmented by 82 swine, 1,013 chickens, 65 geese and ducks, and 58 turkeys, while fowl produced 3,046 dozen eggs during 1890. Draft and riding horses raised on Luce County farms for lumbering, farming, and transportation uses numbered 56 when the 1890 census was taken.[11]

While far from being highly mechanized, the early farming practiced in Luce County was not entirely of the spade-and-hoe type. Itinerant operators of mowing machines, threshers, reapers, and hay presses traveled about the farming areas, aiding in the autumn harvest of grain and grass crops.[12] The August 29, 1890 issue of the *News*, for instance, notes that "The hay pressers are doing a big business this season. Anyone wanting hay pressed should make their wants known at once, as the press will be moved to Germfask soon." And again, "E. M. Sanderlin started his threshing machine last Sunday. He commenced at George Smathers, threshing oats for that gentleman." It would appear from other similar items in the newspaper that few or none of the farmers possessed machinery of their own, a fact readily explained by the small size of cleared areas on the new farms and the limited capital possessed by most pioneer homesteaders.

Throughout various issues of the *News* for 1890 optimism prevailed concerning the future of agriculture in Luce County. Incoming settlers and local lumberjacks were beginning to take up land,[13] favorable weather and fertile virgin soils produced good yields of crops,[14] and growing logging and timber-processing industries of the area furnished a sellers' market for all agricultural prod-

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[8] *Ibid.*, July 4, 11, Aug. 8, 15, 1890.

[9] *Ibid.*, June 27, July 25, Aug. 22, 1890.

[10] *Ibid.*, July 27, Oct. 17, 1890.

[11] Agricultural conditions during 1890 on one of the better farms in Luce County were described in an editorial in the Aug. 15, 1890 issue of the *Newberry News*. It stated: "It was with genuine pleasure . . . that we visited the farm of P. S. Hamilton last Saturday. This is his first season of actual residence on the farm, and the result of his labor is really wonderful. . . . Mr. Hamilton has about 20 acres of oats, 5 acres of potatoes and two of as fine looking buckwheat as one could wish to see. He also has six different varieties of corn growing on his place. . . . His root crops comprising turnips, mangles, beets, carrots, etc., are a pleasure to look at. He also has in his garden an extra fine crop of cucumbers, pumpkins, and squash, all of which shows what energy and enterprise will accomplish in a new country, and proves that both soil and climate are adapted to successful farming when intelligently managed. Phil is proud of his farm and takes pleasure in showing visitors his stock of cattle, pigs, and poultry. Also his splendid grain and root crops. He has recently purchased of L. C. Pratt forty acres of timberland east of his homestead. He has let the job of clearing twenty acres which he will stump and plow this fall, and have in good shape for cropping next season. There is a handsome frame residence on the farm with commodious and comfortable buildings for horses and cattle. In order to store his large crop and to make room for still greater in the future, he will build this summer an addition of fifty feet to his grain barn. . . ."

[12] *Ibid.*, July 11, Aug. 25, 29, Oct. 17, 1890.

[13] There were 21,669 acres of government land in Luce County available for homesteading or acquisition for timber and minerals in June 1899.

[14] *Newberry News*, Aug. 8, 1890.

uce. Time after time their newspaper expressed the high hopes of citizens of the county.[15] The movement to the land became so pronounced that it was claimed "the people of Newberry have the homestead craze."[16] At least one large company, the Peninsular Land Company, was making an organized effort to induce settlers to take up newly logged lands.[17] The concern had planted about 60 acres of fall wheat on some of its holdings in 1890, and planned to seed some 200 acres to oats the following spring in an effort to prove the excellent agricultural potentialities of the area.

*Expansion, 1890–1930.* In the decades between 1890 and 1930 agriculture grew moderately but steadily in Luce County. Each year new settlers arrived, while simultaneously a number of local woodsmen and village dwellers left their former occupations and took up farming.[18] The steady rise in the nonfood producing village population of the county, the increasing number of patients at the newly established State Hospital for the Insane south of Newberry, and the growing influx of tourists all afforded a ready market and steady demand for local farm products that could be met only by an expanding agricultural economy. Furthermore, both government and private agencies concerned with disposition of cutover lands actively encouraged and fostered agricultural settlement.[19]

[15] The following is a typical statement: "It is also very gratifying to know that the excellent farming land in close proximity to the town is being largely bought up and settled upon.... We doubt not but that Newberry will yet be surrounded by a prosperous farming people...." *Ibid.*, Nov. 28, 1890.

[16] *Ibid.*, Jan. 16, 1891.

[17] "Next spring an effort will be made by the Peninsular Land Company to secure settlers for the land which is being cleared.... The price will be greatly reduced and every inducement held out to settlers to locate here.... We have no doubt that next spring will see a large influx of settlers in Luce County." *Ibid.*, Oct. 17, 1890.

[18] *Ibid.*, June 8, 1900, Mar. 24, 1911, Feb. 25, 1921, Jan. 17, 24, and Apr. 11, 1930.

[19] Among these were the Duluth, South Shore, and Atlantic Railroad (Sept. 7, 1900), the U. S. Land Commissioner at Marquette (Nov. 9, 1900), the Upper Peninsula Land Company (May 6, 1910), the Northern Michigan Land Company (Jan. 13, 1911), the Michigan State Experimental Farm at Chatham (Feb. 10, 1911), the Western Land Securities Company (Apr. 14, 1911), the Upper Peninsula Development Bureau (May 21, 1920), and the Michigan Agricultural College at East Lansing (Dec. 17, 1920). *Ibid.*, issues indicated by the dates in parentheses above.

The cost of establishing a farm was low, for good cropland close to the railroad was cheap,[20] low-priced building lumber (perhaps from logs taken from the farm) was available, or log houses could be built with practically no outlay of cash, fuel in the form of timber was near at hand, pure well water was easily obtainable, and a fair income from lumber was available while clearing the land and getting it ready for cultivation.[21] Moreover, the region was suited to production of ordinary crops by ordinary methods familiar to the farmer. Finally, agriculture, which offered a relatively independent means of living, neld special appeal to local workers in more regimented occupations such as lumbering and millwork. As a result, the total farm acreage in Luce County increased from 8,440 acres in 1890 to 25,707 acres in 1930, and improved farm land from 1,614 to 10,395 acres in the same period. Simultaneously, the number of farms in the county rose from 55 to 178. Moreover, during this period, there was at no time marked regression either in farm acreage or number of farms (Figure 2).

Throughout the period 1890 to 1930 agriculture continued concentrated in an east-west belt south of the Duluth, South Shore, and Atlantic Railroad, in the southern part of Luce County (Figure 3), where a combination of relatively fertile soils, local markets in villages and lumber camps,[22] and access to more distant consumers via railroad and good roads made farming easy and profitable. An occasional isolated farmstead was established in the sandy central and northern parts of the county,[23] but few succeeded for long and almost all eventually reverted to wilderness.

[20] "There are no lands in the country that can be bought as cheaply as in the upper peninsula of Michigan. If one should suggest that it can be bought for $5 to $25 an acre, people in Illinois, Indiana, and Iowa, where the price of land reaches from $100 to $250 an acre, would be amazed and would shake their heads in unbelief...." *Ibid.*, Feb. 17, 1911.

[21] *Ibid.*, Dec. 2, 1910.

[22] By 1905 most of the pine timber in the northern part of Luce County had been cut, and lumbering there had all but disappeared. Henceforth, logging in the county was confined largely to the hardwood forests of the south.

[23] The J. H. Clark homestead (parts of sec. 25, T. 49 N., R. 8 W.) located some 21 miles northeast of Newberry was one such farm in the northern part of Luce County; the Joseph A. Peterson homestead (parts of sec. 27, T. 47 N., R. 11 W.) located some 10 miles northwest of Newberry was another such farm in central

Despite the steady growth of agriculture, its general character remained essentially the same as when the earliest settlers began farming in the 1880s. The average farm size continued moderate, ranging from a minimum of 95 acres in 1900 to a maximum of 144 acres in 1930. Although the percentage of improved acreage on the typical farm increased from less than 20 in 1890 to more than 40 in 1930, as the agricultural economy of the area matured, nevertheless the greater part of most farms persisted as unimproved woodland and woodland pasture. Both moderate farm sizes and their small percentages of improved acreage merely reflected difficulties inherent in logging and stumping the densely forested lands of Luce County.

As in other parts of the United States where moderate to small farm size, relatively infertile soils, and short growing season limited productivity of individual farms, tenantry was insignificant in Luce County, and almost all farms of the area were operated by owners rather than by renters or share croppers. Many farmers combined summer work on their crops with winter lumbering, either on their own wood lots or as employees of a logging company.[24]

Throughout the entire period, 1890 to 1930, hay continued dominant in this land of cool moist summers while oats and potatoes, both well adapted to such a climatic regime, ranked second and third respectively as important crops. Less significant crops included wheat, rye, barley, corn, and vegetables. As in earlier years, livestock played a major role in the farm economy from 1890 to 1930. Cattle, both dairy and beef, sheep, swine, horses, and fowl were all numerous, and products such as milk, cream, butter, eggs, wool, and meat formed a major source of income for most farmers.[25] Small apple orchards continued common on many farms.

*The Search For New Farm Products.* Of particular significance in the agriculture of Luce County during its years of expansion and growth was the search for a new crop or product that would prove a bonanza to the farmer. Time and again it seemed that at last the farm product had been discovered that would lift the county out of agricultural mediocrity. Celery, sheep, beef cattle, peas, swine, orchards, barley, sunflowers, rye, wheat, corn, alfalfa, and fur farming all were hopefully tried but without success.

Two innovations, the raising of sheep and beef cattle, promised for a time to be successful. Large acreages of stump land in the southern part of the county, unclaimed by the farmers, supported rich natural stands of clover and grass which thrived and died year after year without being utilized.[26] Water for stock was abundant in lakes and streams throughout the summer, and temperatures during even the hottest months were seldom if ever uncomfortable. Severe droughts were infrequent, and pastures rarely dried up, while hay, grain, and root crops for winter feed were easily raised. Prolonged and severe winters caused the sheep to grow denser and longer fleeces than in more southerly latitudes. Furthermore, the persistent freezing temperatures of winter were uninterrupted by thaws and chilling rains that caused havoc among herds and flocks farther south. As one article in the *Newberry News* for September 23, 1910 stated, the county indeed seemed to have "immense natural advantages . . . for stock raising."

Attempts were made by certain local farmers, lumbermen, and large landholders, as well as a few cattlemen from western States who settled in Luce County,[27] to capitalize on such advantages during the two decades, 1900 to 1920. For instance, the Lake Superior Iron and Chemical Company of Newberry, a major lumbering concern in the county, established a farm of several hundred acres on cutover land south of McMillan on which hundreds of cattle were pastured to provide meat for lumber camps.[28] M. E. Beurmann, Murphy and Gormely, Bart Saxbe, a Mr. Pingston, and other large landowners in Luce County likewise raised and shipped out carloads of cattle,[29] while John Corson, "the Luce County sheep man," marketed large numbers of sheep.[30]

Luce County. *Newberry News*, July 20, 1900, and Aug. 27, 1920, respectively.

[24] *Ibid.*, Dec. 23, 1910, Mar. 24, 1911, Apr. 11, 1930.

[25] Details on the acreages of crops, numbers of livestock, and output of livestock products for Luce County, as contained in the decennial United States census reports, are given in Figure 2.

[26] *Newberry News*, Sept. 23, 1910, Aug. 6, 1920.

[27] *Ibid.*, Sept. 10, 1920.

[28] *Ibid.*, Feb. 24, 1911.

[29] *Ibid.*, Oct. 7, 1910, Apr. 23, Sept. 10, 1920, and Jan. 14, 1921. Many of these cattle were shipped to Chicago; others went to Buffalo and Detroit. *Ibid.*, Oct. 7, 1910, Sept. 10, 1920.

[30] "John Corson the Luce County sheep man, made a shipment of spring lambs to Detroit last week which topped the market, bringing the highest price paid for

In addition, many farmers engaged in stock raising on a smaller scale.[31] So significant had the industry become by 1920 that the Duluth, South Shore, and Atlantic Railroad announced plans to erect a small stock pen and yard at Newberry in order to accommodate stock growers of the county.[32] It was common talk among residents that large packing houses soon would be established in several urban centers of the Upper Peninsula, including Newberry, to serve adequately the growing cattle and sheep industry and make the region independent of the Chicago yards.[33]

The meat and wool-growing industries of Luce County were to have a relatively short life, however. Certain disadvantages, including a long and expensive winter feeding season,[34] the relatively high price of good land compared with grazing country in the West, and the menace of wolves and coyotes,[35] had been overlooked or minimized in their importance by the ranchers. The abrupt drop in prices of livestock products during the depression years following World War I put an end to the overexpanded industry and all hope for large-scale sheep and beef-cattle production.[36] By 1930 there were but 250 sheep and 150 beef cattle in the entire county, as compared with 1,247 sheep in 1920 and 549 cattle in 1910 at the peak of the industry.[37] So low had meat and wool production declined by 1929 that the Michigan State College Extension Service, the Upper Peninsula Development Bureau, and various newspapers, banks, business firms, and civic organizations in the Upper Peninsula felt it imperative to send special sheep demonstration trains over the Duluth, South Shore, and Atlantic Railroad to restimulate interest of Upper Michigan farmers in the industry.[38] Stops were made at McMillan and Newberry to deliver lectures and place animals and materials on exhibit. No effort was made, however, to foster the return of large sheep ranches. Rather they demonstrated to the farmers the value of a small flock of sheep as a profitable side line. Additional inducement to the reestablishment of the livestock industry was offered by the agricultural agent for Luce County and the State agricultural commissioner through articles published in the *News* at frequent intervals.[39] Little increase in numbers of sheep and beef cattle has resulted to date, however.

Field peas were another crop that seemed to hold great promise during the early days of agriculture in Luce County. Peas thrived on the sandy loam soils so common in the area and were well suited to the relatively short cool summers there. In addition, considerable nitrogen could be added to the soil by plowing under vines and roots after the pods were harvested.[40] With such advantages, little difficulty was experienced by representatives of several seed companies and canneries in persuading Luce County farmers to plant a considerable acreage of the crop.[41] The area devoted to field peas increased from some 30 acres in 1890 to 420 acres in 1900 and 858 acres in 1910.[42] In the latter year peas supplanted potatoes as the third most important crop in the

range lambs on the Detroit market this season. Last season Mr. Corson duplicated this performance in a shipment made to the Buffalo market. Mr. Corson is one of the western ranchers who came to Cloverland [the Upper Peninsula of Michigan] two years ago, establishing a sheep ranch in this county, and to say that he is pleased with conditions here is putting it mildly." *Ibid.*, Sept. 10, 1920.

[31] The boom in the cattle and sheep industry was not confined to Luce County but was general throughout the Upper Peninsula. In August 1920 there was an estimated 50,000 head of sheep and 5,000 beef cattle grazing on the cutover ranches in Upper Michigan. *Ibid.*, May 21, June 11, Aug. 6, 1920.

[32] *Ibid.*, May 21, July 30, 1920.

[33] *Ibid.*, Oct. 8, 1920.

[34] An early warning concerning this handicap to the cattle industry in Luce County was given by a Mr. Lumm, a visitor to the area from Indiana, in 1910. *Ibid.*, Dec. 30, 1910.

[35] *Ibid.*, Sept. 20, 1920, Dec. 20, 1929.

[36] "Luce county cattle and sheep raisers have been hard hit this season by the drop in the markets. Many of them did not realize enough on their herds to cover the initial cost and are out their season's work and thousands of dollars besides. The blow has been a severe one particularly to those just starting in the business." *Ibid.*, Oct. 29, 1920.

[37] U. S. Bureau of the Census, *Census of Agriculture*, 1910, 1920, and 1930.

[38] *Newberry News*, May 3, 24, July 26, 1929.

[39] *Ibid.*, July 5, Dec. 20, 1929.

[40] *Ibid.*, Apr. 7, 1911.

[41] "C. N. Coutler, representing Brotherton, Rice and Company, the seedmen, was in town this week endeavoring to interest the farmers in this vicinity in raising peas for his company." *Ibid.*, June 29, 1900.

[42] U. S. Bureau of the Census, *Census of Agriculture*, 1890, 1900, and 1910.

county and ranked only slightly lower in acreage than oats, the second crop.

Seed houses and canneries contracted with farmers for certain acreages of peas, the seed to be furnished and the harvested crop to be bought by the business concerns.[43] For several years the quality and yield of peas were excellent, and the crop was sold at a handsome profit for seed purposes.[44] Hope ran high that at last a successful money crop had been discovered. Unfortunately, however, peas were a crop for which there was only a limited national demand. Hence, as competing areas in other parts of the country with equal or better natural and economic conditions for pea production rapidly expanded their acreages of the crop, a periodically glutted market developed, in which prices frequently failed to compensate for production costs. A sequence of years of low prices, together with occasional years of drought when the pea crop was a failure, frightened the farmers from such a speculative crop. By 1920 the acreage in field peas had declined to 77, and by 1930 the crop was so insignificant that it did not merit separate enumeration in census returns.

Celery was still another farm product that held forth glowing prospects of large financial returns to the early Luce County farmer, for there were literally thousands of acres of marshland in the county suitable for the crop. Mention has already been made of the Newberry Celery and Improvement Company, Ltd., which had drained a small tract of marshland east of Newberry by 1890 and was growing over 200,000 celery plants annually. Prospects for the new industry appeared favorable. The product found a ready market in places as far distant as Pennsylvania, Duluth, and Minneapolis,[45] while possibilities for expansion within the county were virtually unlimited on vast tracts of fertile but unused black marsh soils. As stated in the August 22, 1890 issue of the *News*, "the future of this infant industry is bright indeed, and we look forward in a few years to seeing hundreds of acres of land devoted to the cultivation of celery, and giving employment of many people."

Progress was slow, however, for the cost of cutting timber from, and draining, waterlogged lands was high, while local capital was scarce. For a time in 1910 it appeared as if celery (and related truck crop) production would develop on a large scale, for a Saint Paul land syndicate then was contemplating purchase of the extensive Tahquamenon River flats and their drainage for crop purposes.[46] The project, however, failed to materialize, and the celery industry continued on the same small scale as before. In 1920 only 25 acres were devoted to the crop,[47] and the acreage today remains about the same.

There seems to be little hope for any considerable future development of celery production in Luce County. Lack of capital to finance expansion, remoteness from large urban markets as compared with the equally good marshlands of Lower Michigan, competition from high-quality California celery, and the hazard of fall snow and frosts,[48] all militate against the local industry.

During past decades considerable discussion arose among local residents of Luce County concerning the feasibility of establishing commercial apple orchards. Some folks were so optimistic as to advocate extensive production of peaches, cherries, and plums![49] The thrifty backyard apple

[43] "The seed houses doing business with the farmers in this locality stand to lose a tidy sum of money owing to the partial failure of the pea crop because of the long drouth .... the seed houses will scarcely get their seed back and these will be of an inferior quality...." *Newberry News*, July 29, 1910.

[44] "The short crop of peas of all grades ... advanced the price of seed for the fancy grades of peas for next season to $8 per bushel, when ordinarily they bring from $2 to $3 a bushel.... The indications are ... that the farmers who put in a crop of peas next spring will get a good round price for them in the fall." *Ibid.*, Jan. 13, 1910.

"The finest field peas raised in the United States are those grown on the sandy loam soils of the upper peninsula of Michigan ... so fine is the quality of these peas that the seed men are buying all they can get of them for seed purposes ... the farmers in the upper peninsula have been coining money on this crop for seed alone...." *Ibid.*, Apr. 7, 1911.

[45] *Ibid.*, Nov. 30, 1900.

[46] The following front-page headline announced the prospective deal: "Immense Celery Farm. St. Paul Syndicate Proposes to Create Tahquamenon River Flats Into Great Celery Fields." *Ibid.*, May 6, 1910.

[47] *Ibid.*, May 21, 1920.

[48] *Ibid.*, Nov. 16, 1900.

[49] "... I want to say that Lakefield [Township, in Luce County] is going to be the banner fruit township in the U. P. [Upper Peninsula] in the near future. The business has been tried and proven on a small scale.... On every farm today you will see a young orchard set out and all the farmers are adding to their orchards every year.... Just as soon as there is enough produced to induce buyers to come in, their troubles

orchards maintained by many farmers since the beginnings of agriculture in the area boded well for success of the venture, and several farmers during the early years attempted to grow the fruit on a large scale.[50] Thus it was that the total number of orchard trees (almost all apple) in the area increased from 3,257 in 1900 to a peak of 9,129 in 1920.[51] Many of the trees were in small home orchards, it is true, but the commercial industry seemed promising.

Certain disadvantages have subsequently tended to reduce the number of trees, however. One of the most important handicaps has been occasional unseasonable frosts in late spring or early autumn and sometimes even in midsummer, which have destroyed blossoms or fruit and at times even damaged the trees themselves. To uncertainty of crop must be added failure of Luce County orchardists properly to select and grade their fruit to meet requirements of urban purchasers. In consequence, western apple growers have invaded the Michigan market with their standardized high quality fruit since 1920 to such extent that the Luce County product is unable to compete.[52] By 1930, therefore, the industry was definitely on the decline, with only 5,515 orchard trees in the county, and the commercial apple industry had all but disappeared.[53]

Fur farming was another, and highly specialized, branch of agriculture that seemed to hold great promise in Luce County during the 1920s. Abundance of cheap cutover land, ideal natural habitat for small wildlife, as well as constantly increasing prices for furs, furnished incentive for development of the industry. By 1929 a fox farm was established in southern Luce County.[54] The game warden at Newberry hoped that beaver farms would follow.[55]

The fur industry failed to take hold, however, and the lone fox farm was abandoned in a few years. The high cost of fencing large acreages necessary for successful farms,[56] losses among stock due to disease, predatory animals, and poachers, and a drop in fur prices during the great depression of the 1930s contributed to its failure.

Only brief mention need be made of attempts to establish still other crops and products in the agricultural economy of Luce County. Barley enjoyed increased popularity in the years centering upon 1930, when smooth awn varieties which lacked the rough beards of former types and were just as pleasant to handle as oats became popular.[57] The acreage of the crop increased from 173 in 1920 to 542 in 1930. Rye became a significant crop during years centering about 1920,[58] when it exceeded potatoes in acreage, but later it almost disappeared from the area. Increased emphasis on wheat between 1900 (307 acres) and 1920 (417 acres),[59] after it was wisely ignored by early Luce

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will be over, as the crop will be sold right on the tree. Not only apples, but cherries, plums and all kinds of small fruits are produced to perfection, and I am satisfied that within a few years you will see peaches and grapes successfully grown in this county. Mr. F. W. Greenfield is going to set out a number of peach trees next spring, and if there is any succeeding in the business, he will do it." *Ibid.*, Dec. 23, 1910.

[50] *Ibid.*, Mar. 8, Apr. 5, 1901, Dec. 23, 1910.

[51] U. S. Bureau of the Census, *Census of Agriculture*, 1900, 1920.

[52] "Mr. Powell [Michigan State Agricultural Commissioner] declared that Michigan farmers are not beginning to meet the demands of their home market for products which they can grow better than the farmers in any other state. He cited, as proof the fact that in Detroit large shipments of Oregon apples are brought in and sold to Detroit restaurants and hotels. 'Oregon apples are by no means equal to Michigan apples in quality and flavor,' he asserted, 'but the Detroit restaurants and hotels want apples of uniform size for baking purposes and they have to go to the Oregon growers for them. Michigan farmers do not see fit to sort and grade their apples in this manner, so they are missing this big market where fancy prices are paid.'" *Newberry News*, July 5, 1929.

[53] U. S. Bureau of the Census, *United States Census of Agriculture*, 1930.

[54] *Newberry News*, May 24, 1929.

[55] *Ibid.*, Sept. 20, 1929.

[56] "Fencing suitable for keeping busy beaver and the almost equally industrious muskrat on the job costs from $900 to $1,200 a mile. . . ." *Ibid.*, Sept. 20, 1929.

[57] These varieties were the Wisconsin Smooth Awn, Velvet, and Spartan. *Ibid.*, Dec. 20, 1929.

[58] "Luce Farmers Take Prizes. Five Luce County Farmers Are Prize Winners at Chicago Exhibit. . . . When one considers that rye was entered from all parts of the U. S. and Canada, these farmers and Luce County are to be congratulated . . . Luce County is rapidly becoming a Rosen rye seed center. This past fall this seed was shipped to five different states and a carload of fifteen hundred bushels was sold to a Farmer's association in Canada." *Ibid.*, Dec. 10, 1920.

[59] The relative importance of wheat during this period is attested by the fact that a Sault Ste. Marie

County farmers, was followed by a sharp decline in its production during the 1920s and 1930s. The cool short summers proved unsuitable for the crop, and practically no wheat is now grown in the area. Corn is one of the most recent crops attempted. Its acreage, negligible until 1920, had grown to 229 acres by 1930 as its value for ensilage and hogging-off became evident to Luce County stock raisers. It does not mature with certainty in the summers of the area, however, and gives little promise as a major crop.

Despite the number of specialized farm products tried without success, the story of agriculture in Luce County from 1890 to 1930 has not been one of constant failure. Contemporaneously with experimentation on all the above-mentioned products, steady and encouraging growth has marked the output of the four "old reliables"—hay, oats, potatoes, and dairy cattle (Figure 2). These fostered and maintained the growth of the farming industry when other products, promising much but offering little, failed to provide the El Dorado envisioned by their promoters.

Hay (mostly timothy and clover, alone or mixed) consistently occupied from one-quarter (1910) to more than two-fifths (1920) of the total improved acreage in the county, with the absolute acreage increasing from 525 in 1890 to a peak of 4,294 in 1920.[60] Oats far outstripped all other grain crops in both acreage and production during the entire period, although the increases in barley and corn production since 1920 have somewhat reduced, but not overcome, the leadership.

The potato crop, while occupying a smaller acreage than hay or oats, was almost as important in value as either of these crops,[61] and was equally suited to the local soil and climatic conditions. At the same time potatoes were sufficiently close to the major markets of the country to compete successfully with Maine and Idaho potatoes.

Dairy cattle, always important in the agricultural economy, far outdistanced all other types of livestock after 1910.[62] Such data, of course, merely confirm the fact that Luce County is a land better adapted by nature to dairying than any other type of farming. Light soils, together with cool moist short summers, favored the growth of grasses and oats for feed, while the peripheral location along the margin of the great northeastern United States urban market favored conversion of such crops into high-value and low-bulk products like cheese, butter, and cream.

*Land Settlement Schemes.* While the agricultural industry of Luce County constantly expanded during the decades, 1890 to 1930, the rate of growth was far too slow to satisfy the more ambitious citizens. Year after year they heard of spectacular developments on the prairie lands of western Canada and the irrigated tracts of the western United States, while the farming industry in their own community advanced at snail's pace. Hence, they greeted with considerable enthusiasm the several recurrent schemes to convert vast acreages of cutover and marshy wastelands in the Upper Peninsula into farming country.

One of the earliest attempts to settle the lands of Luce County on a large scale was made during the 1890s by the Peninsular Land Company, which endeavoured to secure settlers for areas

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flour mill regularly advertised its services in the *Newberry News* to Luce County wheat farmers. *Ibid.*, July 8, 1910.

[60] Of a total hay acreage in 1900 of 1,744, some 1,653 acres were in timothy and clover, alone or mixed. Equivalent figures for 1910 were 1,763 acres out of a total of 1,921; for 1920, 3,857 acres out of 4,294; for 1930, 3,131 acres out of 3,593. U. S. Bureau of the Census, *United States Census of Agriculture, 1900, 1910, 1920, 1930.*

[61] Importance of potatoes in the agricultural economy of Luce County may be adjudged from the following quotation:

"Most people in the southern part of the state think there are but two seasons in the year in this part of Michigan, three months summer and nine months winter. They are wrong. There are five seasons—spring, summer, fall, potato digging time and winter. Fall is the shortest season in the year and is followed by potato digging time, the length of which depends on the willingness of winter to hold off. . . .

"Potato digging time is a real season here. It affects everybody in the country and most everybody in the villages for two or three weeks if the weather does not get too cold. Woodsmen get good pay, and mill men are not scrimped for wages as they are in towns farther south, but hundreds of them count on laying off every potato digging time to make some easier and quicker money. . . .

"Schools are all out in the rural communities during the potato season, for the children are utilized, and they want to be utilized, for they are paid a cent a bushel for picking up the big spuds. . . ." *Newberry News*, Nov. 11, 1910.

[62] It is especially true if one recalls that one cow is the equivalent, in animal units, of several swine or sheep and of many fowl.

which were being cleared of timber in southern Luce County. Though the results were unsatisfactory, little concern for the future of agriculture was felt in this pioneer area. As stated in one item in the *Newberry News*, "We have no doubt that next spring will see a large influx of settlers in Luce County. . . . The settlers who are already located throughout the county are making rapid progress toward securing well tilled and productive farms."[63] And again, in a later issue of the *News* for the same year, appears: "We doubt not but that Newberry will yet be surrounded by a prosperous farming people."[64] How radically this attitude of positive optimism was to change in the future!

During the 1890s and 1900s an active advertising campaign was carried on by the Duluth, South Shore, and Atlantic Railroad to dispose of the vast land grants it had obtained from the Federal Government in the Upper Peninsula. Almost every issue of the *Newberry News* for several years carried large advertisements by the railroad offering "fertile farming land for sale at low prices." While described as "timbered lands and natural meadow lands interspersed with lakes and streams, convenient to rail and water transportation and located near important markets,"[65] most of such lands were actually stump-covered infertile sands or thickly-wooded undrained marshes and swamps. Good farm land was restricted to scattered small tracts in otherwise unsuitable terrain. As might be expected, the sales of railroad land in Luce County to individual farmers were few, and the acreage in farms remained but a minute fraction of the total area of the county.

Failure of the Peninsular Land Company and the Duluth, South Shore, and Atlantic Railroad to induce colonization on a large scale did not dampen the faith of Luce County residents, and the next great project for widespread settlement of the area, started in 1910, was hailed with banner headlines in the local newspaper.[66] The scheme, backed by a Saint Paul, Minnesota syndicate known as the Northern Michigan Land Company (later the Western Land Securities Company), involved among other things the lowering of Big Falls on the Tahquamenon River along the eastern boundary of Luce County and the draining of several hundred thousand acres of marsh and swamp land in the Tahquamenon and Sage valleys with the object of converting them into agricultural lands.[67] Like others before them, these ambitious plans failed to materialize since the cost of draining and clearing was prohibitive as compared with the value of the farm land that would be made available.[68]

[63] *Newberry News*, Oct. 17, 1890.

[64] *Ibid.*, Nov. 28, 1890.

[65] *Ibid.*, Nov. 9, 1900.

[66] Front-page headlines like the following appeared in various issues of the *Newberry News* during 1910 and 1911:

"Immense Celery Farm. St. Paul Syndicate Proposes to Create Tahquamenon River Flats Into Great Celery Fields." (May 6, 1910)

"Big Deal In Land. 705,000 Acres in Upper Peninsula Sold to H. L. Hamilton of St. Paul, Minn." (Jan. 6, 1911)

"Reclamation Project. Large Area Of Waste Land Along Tahquamenon River To Be Reclaimed For Agriculture. Land Rich And Fertile And When Drained It Will Make An Ideal Stock Raising Country —Homes For Thousands." (Jan. 13, 1911)

"Big Drainage Project. Nothing Like The Work Planned Has Ever Before Been Undertaken By Private Capital In This Country." (Apr. 14, 1911)

[67] *Newberry News*, Jan. 13, Apr. 14, 1911.

The scope of the program proposed by this company is indicated by the following extracts from an article appearing in the Jan. 13, 1911 issue of the *Newberry News:*

"According to authentic reports the acquisition of more than 700,000 acres of upper peninsula land by H. H. Hamilton and others of St. Paul . . . means the immediate opening up and placing on the market of thousands of acres of farm land. . . .

"In addition to the promotion and sale of the great acreage of land which is ready for cultivation as soon as the timber is cleared off, the company owns 250,000 acres of swamp land in the Tahquamenon River country and in and about Seney. . . . To bring this land into the market, the new company will undertake one of the greatest drainage projects ever attempted by private capital in this part of the country. . . .

"The principal offices of the company will be maintained in Chicago, but the bulk of the work of selling land to settlers will be carried on by 900 subagents. . . ."

A representative of the St. Paul syndicate, in commenting on the project, stated that "the present theory under contemplation is the blasting of the river bottom just above the upper falls so as to lower the base of drainage about three feet and in that way drain the thousands of acres in that vicinity." *Ibid.*, May 6, 1910.

[68] One of the problems posed in draining the Tahquamenon and Sage River swamps was what to do with tens of thousands of beavers in the area that were protected by law from hunters and trappers. The

It was in 1910 that the first serious doubts as to the future of agriculture in Luce County were expressed publicly. Even then, the inherent natural handicaps for farming were minimized and the retardation of colonization was attributed instead to lack of advertisement and publicity given the Upper Peninsula as compared with other pioneer lands, especially the Canadian northwest.[69] Strangely enough, despite the strong feeling of competition that residents of Luce County felt concerning the rapidly developing prairie areas of Canada, the *News* continued for many years to carry advertisements and feature articles extolling the agricultural opportunities available to the immigrants in that region![70] To remedy what was then thought to be the basic cause for slow progress of colonization, the Upper Peninsula Development Bureau was organized in 1911 for the purpose of disseminating information concerning agricultural opportunities to prospective settlers.[71] The organization was not financed by

following article appearing in the Feb. 3, 1911 issue of the *Newberry News* states the case well:

"In connection with the movement to colonize a large acreage of at present vacant upper peninsula land . . . it has been suggested that the law protecting beaver, unless repealed, may be a drawback to the plan. If the marsh lands of this region are to be settled and cultivated the first step will be the provision of adequate drainage. At the present time beavers have all the small streams blocked with their dams and none will molest them.

"Beavers not only prevent a natural drainage of lands, but by building the dams and shutting off the flow of the streams they often make marshes of what would otherwise be dry land. . . .

"There is a general belief that the only reason for protecting beaver is a sentimental one, and, that the development of the country demands that the law be repealed. The beaver and colonization cannot exist in the same locality."

[69] The following extracts from an article appearing in the June 10, 1910 issue of the *Newberry News* illustrate the general feeling among Luce County residents at that time:

"U. P. Lands Not Advertised. Infatuated With Romance Of The Unknown Opportunities At Home Are Overlooked. Emigrants Pass By Us. Campaign Of Publicity Needed to Exploit Agricultural Possibilities of Northern Michigan.

"A Duluth railway official is authority for the statement that an average of 300 farmers pass through Duluth each week on their way to take up farms in the Canadian Northwest. . . . 'Why?' is the question that at once suggests itself. . . . Why are these sturdy agriculturists passing right through the upper peninsula of Michigan and northern Minnesota, with its thousands of acres of undeveloped farming land to Saskatchewan and Alberta. . . .

"Is it true that the Canadian Northwest offers so much greater opportunities . . . than northern Michigan? The writer believes not. The fact of the matter is that our British cousins have been and are the better advertisers. . . . It is not the purpose of this article to show that any of these claims for the Canadian Northwest are untrue or even overdrawn, but it is safe to say that only the bright side of the picture has been shown. . . .

"Suppose that the business interests of the upper peninsula of Michigan had been pursuing a similar aggressive advertising policy for the last five years. Could not just as good a showing be made for the agricultural opportunities and successes of upper Michigan as has been made for the Canadian Northwest? True, the upper peninsula will never be able to compete with the Red River valley in wheat growing, but there are other fields of industry which offer just as great inducements to the farmer. . . .

"Without varying at all from the truth, would not a booklet describing and illustrating the agricultural resources of Luce County be just as interesting to a stranger as similar booklets describing the Canadian Northwest?

"Just as long as upper peninsula people continue to hide their light under a bushel, just so long will hundreds of thrifty farmers travel through this country to make their homes in the better advertised farming districts of western United States and Canada."

[70] Typical are advertisements and articles in the *Newberry News* for Sept. 16, 1910, Apr. 23, and Aug. 6, 1920.

[71] "Delegates Appointed. Luce County Will Participate In The Organization of A U. P. Development Bureau.

". . . The movement about to be inaugurated to advertise to the people of the outside world the agricultural possibilities of the upper peninsula is twenty years behind schedule. We have been asleep for twenty years, and during all this time a steady stream of homeseekers has been passing our very doors, seeking their fortunes in the far west.

"It is time we woke up and commenced tooting our own horns. It's time we stopped this stream of emigration to the west and south. We have as much to offer the pioneer farmer as any other section of the country. How is he to know it, tho', if we don't make a noise?

". . . Luce County can well afford to aid, because with our many thousand acres of undeveloped farming lands we are vitally interested in any scheme that has for its object the settlement of these waste places." *Newberry News*, Feb. 10, 1911.

the government but by voluntary contributions from several great landholding corporations in the Upper Peninsula,[72] as well as from smaller industrial concerns and many individuals. Despite the efforts of the bureau to encourage colonization, there was no appreciable increase in the rate of settlement in Luce County during ensuing years (see Figure 2).

A mild flurry of interest in the possibilities of colonizing Luce County on a large scale was caused by inquiries in 1920 from the Netherlands Emigration League concerning the feasibility of Dutch settlement in the Upper Peninsula.[73] No settlers arrived, however, and the matter was soon forgotten. Returning servicemen from the United States Army and discharged workers from the war-expanded factories of Lower Michigan evidenced considerable interest in potential farm lands of northern Michigan during the early 1920s,[74] but very few new settlers arrived in Luce County. By this time the citizens of the county seem to have resigned themselves to the fact that their lands would never become unbroken expanses of grain and hay fields as they had envisioned earlier. No grandiose schemes for agricultural settlement were advanced since the late 1920s. Instead the realization grew that environmental handicaps of the area—its long, cold, and unproductive winters; its short, cool summers that were adapted only to the production of specialized crops; the limited extent of its fertile soils; and its peripheral location on the northern margin of the great northeastern American market—would relegate agriculture to continued secondary importance.

On the other hand, no spirit of pessimism prevailed among the farming population of the county. They perceived that, despite problems associated with attempts to expand agriculture, the industry was gradually approaching the goal of a stable and profitable system of living on the land.

[72] Among the major contributors were the Calumet and Hecla Mining Company, the United States Steel Corporation, the Michigan Pulpwood Company, and the Cleveland-Cliffs Mining Company. Only the latter concern had appreciable land in Luce County. The typical rate of contribution was one cent an acre. *Ibid.*, Apr. 21, 1911.

[73] *Ibid.*, Dec. 17, 1920.

[74] "Many Land Inquiries. All Records Broken Says Development Bureau Official.

"'More inquiries regarding the upper peninsula have been received at our office during the past few months than ever before,' writes Burt Wermuth, editor of the *Michigan Farmer*, an influential agricultural publication of Detroit, in a recent letter to the development bureau in Marquette.

"'. . . There is a marked tendency toward a back-to-the-land movement by many who have left farms during the past few years to work in shops and factories. There is every indication that upper Michigan will be the objective for an influx of new farmer settlers this spring from other crowded farm areas. . . .'" *Ibid.*, Feb. 25, 1921.

## ENCROACHMENTS OF CATTLEMEN ON INDIAN RESERVATIONS IN THE PACIFIC NORTHWEST, 1870–1890

J. ORIN OLIPHANT

*Department of History, Bucknell University*

In the grazing lands of the intermontane region of the Pacific Northwest, at one time or another during the 1870s and 1880s, there existed, like islands in a large sea, several Indian reservations, some of them of considerable size.[1] Of these reservations, four were in eastern Oregon, four in Idaho, and, for a short while after 1881, four in eastern Washington.[2] Upon them all, except possibly the two southern Idaho reservations, there were encroachments by cattlemen within the period of this study. Naturally such encroachments were more frequent, and more flagrant, on reservations in areas where the grazing interest was one of major

[1] This article is an extension of a paper presented at a session of the Mississippi Valley Historical Association at Rock Island, Illinois, on Apr. 24, 1948.

[2] See the map accompanying the United States Office of Indian Affairs, *Report of the Commissioner . . . , 1880*. Hereafter the reports of this office are referred to thus: Office of Indian Affairs, *Report*.

concern. For that reason this study is principally concerned with the reservations in eastern Oregon; with the Yakima Reservation lying in eastern Washington within the great angle formed by the Columbia River when it turned westwardly to the Pacific;[3] and with the Lapwai, or Nez Percé, Reservation resting astride the Clearwater River in the southern part of the panhandle of Idaho. The other reservations in eastern Washington and those in southern Idaho, in part because they lay on the fringes of this intermontane cattle region, are only incidentally important for the subject in hand.

By the early 1870s the four reservations in eastern Oregon had been established. Southernmost of these was the Klamath Reservation, spread out on either side of the Klamath River and embracing in 1880 as many as 1,056,000 acres. Northward of this reservation was the smaller Warm Springs Reservation, stretching westward from the Des Chutes River and having in 1880 an area of 464,000 acres. Southeastward of this reservation was the huge Malheur Reservation, whose area in 1880 was 1,778,560 acres. North of the Malheur was the Umatilla Reservation, with an area in 1880 of 268,800 acres. Thus in eastern Oregon in 1880 there were in Indian reservations 3,567,360 acres, an area which by 1890 had been reduced to 1,788,800 acres, not by a process of whittling away, but by the blotting out of the Malheur Reservation.[4]

In 1880 the three reservations in eastern Washington had a total area of 6,592,240 acres, of which 800,000 acres were in the Yakima Reservation. The remaining land reserved for Indians was in the Colville and Columbia reservations, situated north of the "big bend" of the Columbia River and north of the Spokane River. In 1890 the Yakima Reservation still consisted of 800,000 acres, but in the northeastern part of the State the area in reservations had been so much curtailed that, notwithstanding the creation of the Spokane Reservation in 1881, the total area reserved for Indians in eastern Washington in 1890 amounted to only 3,777,820 acres.[5]

Between 1880 and 1890 the area of Indian reservations in Idaho was also reduced, but not so much as in eastern Washington and eastern Oregon. The two reservations in the panhandle, the Coeur d'Alene and the Lapwai, had in 1880 an area of 1,482,651 acres, and in 1890 an area of 1,345,151. In 1880 the two southern Idaho reservations, Lemhi and Fort Hall, had an area of 1,266,330 acres, which by 1890 had been reduced to 928,270 acres.[6]

On all the above-mentioned reservations there was more or less good grazing land, and in greater or less measure the Indians thereon, with the passing years, acquired cattle and other livestock. As early as 1872, the Commissioner of Indian Affairs reported that the Klamath Reservation, although of little value for agricultural purposes, was "a good grazing country";[7] and fourteen years later the agent for this reservation wrote that on "the low lands, plains, and hills abounds the celebrated Oregon 'bunch grass,' affording luxuriant pasturage, sufficient to support ten times the number of cattle owned by the agency and the Indians."[8] Valuable also for grazing was the Warm Springs Reservation, on which, as the agent thereof estimated in 1886, Indians were grazing 5,500 head of horses, 1,100 head of cattle, and 1,800 head of sheep.[9] The larger Malheur Reservation contained an abundance of choice grazing land, and the problem thereby raised will be treated at length in subsequent paragraphs of this study. The Umatilla Reservation, though relatively small, was so extraordinarily rich in grazing land that, as early

[3] Except where it appears in direct quotations, the older word *Yakama* has been replaced by the newer word *Yakima*.

[4] Office of Indian Affairs, *Report, 1880*, 235; *ibid., 1890*, 443.

[5] *Ibid., 1880*, 236; *ibid., 1890*, 443–444.

[6] *Ibid., 1880*, 229–230; *ibid., 1890*, 436. One reason, perhaps, why the subject of encroachments by cattlemen on this reservation found no space in the annual reports of the Fort Hall Indian agents was that "accommodations" were there made whereby, under some color of legality, the cattle of white men were allowed to graze on Indian lands. In the Tenth Census, for example, it was reported that 2,500 head of cattle were grazing on this reservation, for which privilege a fee of 30 cents a head was paid; and in 1889 it was also reported that, pursuant to an agreement with the Indians, stockmen were annually wintering some 25,000 head of horses and cattle on the Fort Hall Reservation. Clarence W. Gordon, "Report on Cattle, Sheep, and Swine, Supplementary to Enumeration of Live Stock on Farms in 1880," U. S. Census Office, 10th Census, 1880, *Report on the Productions of Agriculture*, 3: 1095; *Weekly Oregonian* (Portland), Oct. 18, 1889.

[7] Office of Indian Affairs, *Report, 1872*, 65.

[8] *Ibid., 1886*, 212.

[9] *Ibid., 1886*, 223.

as August 15, 1870, Lieutenant W. H. Boyle could write from the Umatilla Agency that the amount of grass on this reservation was "without limit." "The horses and cattle," he observed, "are always in splendid condition, and scarcely need any care in winter, as grazing is good all the year, rendering it a very popular as well as profitable business to raise stock."[10] Eight years later the Commissioner of Indian Affairs reported that this reservation included "some of the finest grazing and agricultural land" in the State of Oregon.[11] Of the pastoral wealth of the other Indian reservations in the Pacific Northwest we need here notice, for the reason heretofore given, only that of the Yakima Reservation in Washington and that of the Lapwai Reservation in Idaho. The former was by nature "well adapted for farming and grazing,"[12] and as early as September 2, 1874, "Father" James H. Wilbur, agent for the Yakimas, advised the Commissioner of Indian Affairs that the Indians under his charge had about 13,000 horses and about 1,200 cattle.[13] Perhaps even richer in grasslands was the Lapwai Reservation, on which the Nez Percés, in the summer of 1886, were said to have "large herds of horses and cattle, and enough land for ten times their number."[14] So valuable indeed was this reservation for grazing purposes that George W. Norris, agent for the Nez Percés, could write, as late as August 15, 1887, that its "advantages for stock raising are unsurpassed."[15]

Upon the choice grazing lands of these reservations some of the cattlemen of the Pacific Northwest cast greedy eyes, and the longer they looked the less disposed they were to put temptation behind them. Throughout the decades of the 1870s and 1880s, from one or another of these reservations, complaint followed complaint to the Indian Office that cattlemen were encroaching on Indian grazing lands, to the increasing exasperation of the Indians. Such complaints, however, should have occasioned surprise to no informed person, least of all to the Commissioner of Indian Affairs. This was the period during which the range-and-ranch cattle business in the Pacific Northwest reached the peak of its development, and it was also the period during which, in many districts of that region, it entered upon a rapid decline. In part the decline was owing to the wearing out of ranges, but perhaps in much greater part it was owing to the increase of sheep breeding and, more especially, to the bringing of arable lands under cultivation, particularly in eastern Washington and northern Idaho. In eastern Oregon, and especially in southeastern Oregon, where, thanks to less abundant land suitable for farming than in eastern Washington and in the untimbered parts of the panhandle of Idaho, the range-and-ranch cattle business, though squeezed and cramped and in places retreating, persisted to 1890 and beyond. Naturally, as competition for the grasslands became keener, the pressure of cattlemen upon the Indian reservations increased.

As early as July 1867, the agent for the Umatilla Reservation reported that the Indians under his care, fearful of losing their reservation, were causing him no end of "trouble and vexation." "The reservation," he wrote, "is completely surrounded by white settlements. . . . So anxious are the white people in the vicinity to possess this land, that threats to remove the Indians by violence are not unfrequently heard."[16] Five years later the Umatilla agent reported that shortly after he assumed the duties of his office he had been compelled to order the white men to remove their stock from the reservation, and that in one or two instances he had had to resort to court action to achieve such eviction.[17] Although for the time being he appeared to be content with his accomplishment, he was compelled to say, in September 1874, that it was impossible for him to prevent altogether the stock of settlers living near the reservation from trespassing on the Indians' grazing land.[18] Four years later, because of the increasing pressure of the whites, the Commissioner of Indian Affairs recommended that the Indians be removed from Umatilla to Yakima, and that the lands of the Umatilla Reservation be sold.[19] This recommenda-

[10] *Ibid.*, *1870*, 56.
[11] *Ibid.*, *1878*, xxxvii.
[12] *Ibid.*, *1871*, 275.
[13] *Ibid.*, *1874*, 339.
[14] *Ibid.*, *1886*, 112.
[15] *Ibid.*, *1887*, 71.
[16] *Ibid.*, *1867*, 83.
[17] *Ibid.*, *1872*, 362.
[18] *Ibid.*, *1874*, 322.
[19] *Ibid.*, *1878*, xxxvii. On Aug. 27, 1878, the Umatilla agent advised the Commissioner of Indian Affairs that he believed that 10,000 cattle and 3,000 horses, belonging to white settlers off the reservation, were grazing on the Indians' land. "Much of the stock belonging to whites in this vicinity," he wrote, "range off and on the reservation at pleasure." Office of Indian

tion, however, was not adopted, and the problem of encroachments persisted. As late as the summer of 1887, it was still acute. Writing on August 15 of that year, the Umatilla agent advised the Commissioner that the Indians on the Umatilla Reservation had approved an act of the Congress (March 3, 1885) to give them lands in severalty, and he added in English not above reproach:

> The Indians seem to be satisfied with all the arrangements with few exceptions, and these only form a few Indians led on by surrounding whites and cattle-men who are, of course, opposed to the whole arrangement, as, when the business is completed, it will seriously interfere with their usual trespassing for grazing purposes on the reservation, as when every Indian owns his own lands and knows exactly his rights, he will know how to maintain them.[20]

Only by "very hard work" could the agent, as late as the summer of 1890, keep outside stock off the Umatilla Reservation.[21]

On the Klamath Reservation trespassing began at an early date, but there the encroachments of cattlemen, it appears, caused no serious trouble until near the end of the 1870s. As late as July 7, 1879, the Klamath agent could write that there was "a friendly feeling existing between the Indians and most of the whites in the vicinity of the reservation."[22] Yet even as he wrote these words trouble was no doubt brewing, for in December 1879 he asked for instructions as to what he should do in the matter of stockmen who knowingly and deliberately allowed large bands of stock to run on the reservation.[23] Some five years later the problem had assumed serious proportions, for in September 1884 the agent complained: "There are in this vicinity several white settlers that are continually allowing their cattle to trespass upon this part of the reservation, especially during the winter, causing the Indians a great deal of trouble. One of these parties has been recently sued for such trespass."[24] By the latter years of the 1880s, the situation was becoming dangerous, and in the summer of 1888 a cavalry company was sent to eject trespassing cattle from the reservation; but the agent, reporting in mid-August of that year that at least 10,000 head of trespassing cattle had been removed by these troops, advised the Commissioner of Indian Affairs that without the continuing aid of the military forces he could not hope to keep off the reservation "the large bands of cattle hovering around its borders."[25] In the summer of 1889 the same thing was happening again, and on July 24, 1889, the Commissioner advised the agent by telegram to notify the owners to remove their trespassing cattle from the reservation, and, if they neglected to do so, to request the United States district attorney to bring action against them.[26] On August 10, 1889, the agent, obviously discouraged, reported:

> Large herds of cattle have been constantly depredating on the rightful domain of the Indians. This has been going on for the last twenty years. I have kept the Indian office informed as to these depredations and have followed their instructions; and yet I have found it impossible with eight police to guard 250 miles of an out-boundary line against the swarms of cattle that hover on all sides and sweep over the boundaries of the reservation upon its rich pasture lands. The Indians are exasperated, and unless more vigorous measures are instituted against these trespassers serious trouble will be the result.[27]

Somewhat less serious, if we may trust the reports of the agent, was the problem of trespassing on the Warm Springs Reservation. There, as late as February 19, 1878, the agent could write:

> There is such an abundance of good grazing country both north and south & east of the Reservation that there is no temptation to turn stock on to it. On the north line some 25 miles distant from this Agency, and near which are white settlements, by *mutual* consent stock both of Indians & whites, is permitted to cross and re-cross at pleasure. Some times Stock-men in driving across this reservation lose a few head of cattle. I am told a few such are now on the Reserva-

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Affairs, Incoming Letters, Oregon, C375 (1878), in the National Archives, Washington, D. C. All letters cited hereafter are in the records of the Office of Indian Affairs in the National Archives.

[20] Office of Indian Affairs, *Report, 1887*, 191.

[21] *Ibid., 1890*, 209.

[22] *Ibid., 1879*, 127.

[23] L. M. Nickerson to Commissioner of Indian Affairs, Dec. 15, 1879, Incoming Letters, Oregon, N498 (1879).

[24] Quoted in "Leases of Lands in the Indian Territory," 48 Congress, 2 Session, 1883–85, *Senate Executive Document 17*, 216.

[25] A. B. Upshaw to Joseph Emery, July 25, 1888, Land Division, Letter Book 176, p. 99; Office of Indian Affairs, *Report, 1888*, 209.

[26] Land Division, Letter Book 187, p. 299.

[27] Office of Indian Affairs, *Report, 1889*, 273.

tion, but I cannot give the number. I shall expect to have them taken off as soon as possible.[28]

Ten years later, however, there was a different story to tell. "The unsettled boundaries of the north and west lines of this reservation," the agent wrote on August 27, 1888, "should be settled at once, for, as at present, it is a constant source of turmoil and trouble. Stockmen, with their stock, constantly infringe upon the rights of the Indians under the plea that they don't know where the line is, and then our trouble and chagrin commences [*sic*], for we can not show it to them with any degree of satisfaction either to them or ourselves."[29]

It was on the Malheur Reservation that the most flagrant and most persistent encroachments by cattlemen were made anywhere in the entire Pacific Northwest. Our knowledge of trespasses on this reservation is no doubt fuller than is our knowledge of encroachments on other Pacific Northwest reservations, thanks to the fact that during the years of the most flagrant trespassing —that is, from 1877 to 1882—the agent at Malheur, W. V. Rinehart, was an uncommon man for such a position, for, besides being energetic, persistent, and honest, he was decently literate. His frequent and illuminating letters and reports to the Commissioner of Indian Affairs provide abundant material for a significant chapter on the history of the relations of white Americans with aboriginal Americans.[30]

As early as December 18, 1877, Rinehart reported that stockmen were grazing cattle on the Malheur Reservation, to the increasing discontent of the Indians; and that these stockmen seemed indifferent to warnings that they were violating a law. Some of them, indeed, had been so bold as to take up residence on the reservation and to "make no secret of their intention to occupy and use the land."[31] On February 27, 1878, Rinehart reported at length on the encroachments, naming guilty persons and listing the numbers of their stock that were trespassing. In general, he found these persons defiant, asking how the government would enforce payment for grazing on the reserve, with some of them even suggesting that the government, if it wanted to save the grass on the reservation, should put a fence around it.[32] "It is simply the old story over," Rinehart declared. "Scarcely any Indian Reservation has escaped similar trouble. While it is to be deplored that such measures become necessary, it can not be denied that prompt and rigorous enforcement of the law is the only remedy for such troubles."[33] By August 1, 1878, he had been informed that an order had been issued from Camp Harney to the intruders to remove their stock, but he observed that none of them had done so.[34]

[28] Incoming Letters, Oregon, S300 (1878).

[29] Office of Indian Affairs, *Report, 1888*, 217.

[30] Rinehart, according to his own testimony, took charge of the Malheur Reservation on July 1, 1876, but received no agency records from his predecessor. W. V. Rinehart to Commissioner of Indian Affairs, June 4, 1878, Malheur Agency Letter Book, Dec. 17, 1877–Sept. 30, 1878, p. 180. Fortunately, two of Rinehart's letter books, the one just cited and another one covering June 14, 1880 to July 18, 1882 have been preserved and are now deposited in the National Archives. During his later years at Malheur, while the reservation was in process of liquidation, Rinehart ceased to be agent and, as custodian for the government, was designated as farmer-in-charge.

[31] Incoming Letters, Oregon, R 7/78.

[32] The contention that the government should fence the Indian reservations was quickly disposed of by Judge Matthew P. Deady in the trespass cases tried in the United States District Court, Portland, Oregon, in June 1880. See footnote 37. Judge Deady's decision, as summarized by W. V. Rinehart in a letter to the Commissioner of Indian Affairs, July 7, 1882, held that the mere setting apart of a reservation was in itself governmental *notice* of the establishment of such reservation and that settlers, if they elected to live near such reservation, must take proper precautions to keep their livestock from trespassing thereon. Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 230–231. Nevertheless, as late as Aug. 20, 1888, the Nez Percé agent could write that settlers living near the Lapwai Reservation "strenuously insisted" on their right to let their cattle graze upon Nez Percé grasslands, "because, as they say, the Indians do not fence their reservation." Office of Indian Affairs, *Report, 1888*, 85.

[33] Incoming Letters, Oregon, R153 (1878).

[34] Office of Indian Affairs, *Report, 1878*, 118. The attitude of stockmen in the Pacific Northwest to such an order was no doubt well expressed in an editorial note in the Silver City, Idaho, *Avalanche* of Mar. 23, 1878: "The stock owners in Harney Valley are reported to be greatly dissatisfied, and justly so, too, in consequence of an order which recently came to the Post Commander at Camp Harney directing him to remove from the Malheur Reservation all cattle now grazing upon it. It also stated that the white people are to be prohibited from infringing upon the domain of the Snakes, although the latter go wherever they please. We suppose that there are some wiseacres at Washing-

In the meantime, the Bannock War, which broke out in June 1878, had completely altered the situation. When this war began, as the Commissioner of Indian Affairs explained in 1880, the 600 Indians confined on the Malheur Reservation departed therefrom, some of them to raid and fight. When the war was over, "those who had taken part in the hostilities, together with 100 other Pi-Utes who belonged at Malheur, were removed with their women and children to the Yakama [*sic*] agency. There then remained about 230 Indians, under Chiefs Ochoho, Winnemucca, and Weiser, who properly belonged at Malheur"; but these Indians did not return to their reservation home. In the light of these changed conditions, the Commissioner recommended that the Malheur agency be discontinued, and that the lands included in the reserve be sold, the proceeds of such sale to "be invested for the benefit of the Indians."[35]

Despite this proposed change of policy, Rinehart was still charged with the difficult task, as he had been before 1880, of enforcing the law against trespassing upon the Malheur Reservation. On March 29, April 21, and May 20, 1879, he had reported that since the removal of the Indians to Yakima, stockmen with their herds had penetrated deeper into the reservation, notwithstanding his published notice to them to withdraw; and on August 15 of that year he had further reported that stories had appeared in Pacific Northwest newspapers predicting that the Malheur Reservation would be broken up. Encouraged by such rumors, stockmen and settlers had begun to lay hold of the choicest lands of the reservation in defiance of the military order of the preceding year. Despairing of the assistance of the troops to remove these trespassers, Rinehart turned hopefully to the Department of Justice, from which he expected a "speedy and effectual remedy."[36] It was not without reason that he supposed that the United States courts would give him effective aid, for on July 12, 1880, he could write that some of the trespassers had been convicted in the United States District Court at Portland and that fines totaling $2,046 had been assessed against them.[37] But, in the main, the problem was still unsolved; trespassing continued, and convictions of trespassers were not easy to get.

> It was plainly demonstrated in the trial of the cases reported [Rinehart advised the Commissioner] that juries are averse to the punishment of settlers for grazing their stock upon Indian land—especially when the Indians are themselves absent from and not occupying their reservation. In the case of J. S. Miller the testimony showed that 600 head had trespassed and by a compromise verdict only 300 head were brought in their finding.
>
> I have no information of any movement among the stock-men to take their cattle off the reservation; and it may become necessary to invoke the aid of the Courts again before they can be induced to observe the law.[38]

Rinehart might have added, had he then known what he was to learn later, that juries, in opposing the punishment of stockmen for grazing their cattle on a reservation not occupied by Indians, were by no means odd. For notwithstanding the fact that Rinehart reported to him more than once the names of offenders, Rufus Mallory, the United States district attorney at Portland, took no action against these trespassing stockmen; and presently Rinehart became involved in a sharp controversy with Mallory. Mallory argued that the grazing of cattle and the cutting of hay on an unoccupied Indian reservation were nothing more than "technical" violations of the law, inasmuch as such prac-

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ton who have doubts as to whether a white man is as good as an Indian."

[35] Office of Indian Affairs, *Report, 1880*, xlvi.

[36] Incoming Letters, Oregon: R253 (1879), R305 (1879), R371 (1879); Office of Indian Affairs, *Report, 1879*, 130.

[37] Rinehart to Commissioner of Indian Affairs, July 12, 1880, Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 2. In his fifth annual statistical report, dated Oct. 14, 1880, Rinehart wrote: "The encroachments of stock-men upon the grazing lands of the reservation continue and gradually increase. Of thirty-two stock-owners, representing about 18,000 cattle and 600 horses, now upon the reservation, six have been made to pay penalties, to wit:

| | | | | |
|---|---|---|---|---|
| John S. Miller, trial by jury, verdict for | | | | $300.00 |
| J. D. Walker, judgment by default for | | | | 312.00 |
| J. Shepherd, | " | " | " | 294.00 |
| Hall Bros., | " | " | confession | 240.00 |
| Peter Stinger | " | " | " | 100.00 |
| Todhunter & Devine | " | " | " | 800.00 |

Two cases failed for want of testimony; and the other parties have not been proceeded against by the U. S. Dist. Attorney." *Ibid.*, 74.

[38] Rinehart to Commissioner of Indian Affairs, July 12, 1880, Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 2–3.

tices did no harm to any Indian. "The grass that grows there is wild," he explained to the Commissioner of Indian Affairs on August 6, 1881, "and if not cut will fall down and rot. It will do no good to the Indians nor to any one else, and under these circumstances I do not see how any one is harmed if the people in that country cut and preserve this grass by making hay of it which may save the lives of many hundred dollars worth of livestock when winter comes."[39] In like vein, on July 23, 1881, he had written to Rinehart: "The grass was growing and if not fed down would fall down and rot. Yet technically the cattle upon the ground were trespassing and there was grounds for suits to be commenced. I did not care to commence them and as I now remember I did not until I was instructed to do so by the Department at Washington."[40] Between the practice of grazing government lands that "technically" belonged to Indians and that of permanently occupying such lands, Mallory, however, carefully distinguished. Persons who had actually "settled" upon the reservation he was in favor of removing therefrom.[41]

To this argument Rinehart replied quickly and vigorously. "As a matter of fact," he wrote Mallory on August 4, 1881,

> these 'technical violations,' as you are pleased to term them, have done and are now doing immeasurably more damage than the graver violations of those persons erecting cabins, corrals and other improvements. Bunch-grass once trodden out, and it is never again reproduced. The hills and ridges upon which it grows are utterly worthless when it is once destroyed. Bunch-grass upon these hills more than eight miles from water is utterly worthless, because not accessable [*sic*] for grazing. As proof that bunch-grass range can be eaten out and destroyed, I need only refer you to the John Day Valley, the hills about The Dalles and in Umatilla County. No better range than these localities once afforded has ever been known in this country; and today, even the number of cattle now upon the reservation could not find subsistence upon the whole of that vast region.
>
> . . . The truth is, let this reservation be over-run for five years more as it has been for three years past, and the grazing lands, which were valuable then will not sell for ten cents an acre.[42]

Though he kept up a good fight to the end, Rinehart could not help knowing that he was losing a campaign. After the Commissioner of Indian Affairs had issued his report in 1880, it was certain that sooner or later the Malheur Reservation would be broken up; yet Rinehart believed it his duty to take thought of the ultimate disposition of the lands thereof. He wrote to the Commissioner on June 10, 1881,

> It is scarcely necessary to say that the persons so trespassing are a bold, unscrupulous class; and, in this instance at least, not law-abiding. They have inaugurated a species of brigandage by which they are enjoying the benefit of fresh range for their stock and first choice of locations, near streams, timber and other natural advantages. And all this to the present and ultimate exclusion of a much better class of people, who would gladly participate in these benefits but for the prohibitions of the law. As matters now stand law-breakers are protected in the enjoyment of exclusive privileges on the reserve.[43]

The pressure of public opinion in Oregon, as elsewhere in the Pacific Northwest, for the opening of the Malheur Reservation, pressure exerted through the press, the Oregon legislature, and United States Senators and Representatives, was of course brought to bear upon the President for the purpose of obtaining an executive order to restore that reservation to the public domain.[44]

[39] Incoming Letters, 14642 (1881). On this subject Mallory unquestionably spoke the mind of the Far West. Seven years later the Nez Percé agent, George W. Norris, writing on Aug. 20, 1888, on the subject of cattlemen's encroachments on the Lapwai Reservation, observed: "It is urged by some that the Indians have more pasturage than they can make use of; that it would be utterly lost unless occupied by them; that no harm is done by their cattle taking the benefit of what the Indians suffer to waste." Office of Indian Affairs, *Report, 1888*, 85.

[40] Incoming Letters, 14648, Incl. No. 1 (1881).

[41] Incoming Letters, 14642 (1881).

[42] Incoming Letters, 14684 (1881).

[43] Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 149–150, and Incoming Letters, 10962 (1881).

[44] An excellent illustration of one type of pressure that was brought to bear on the Federal Government is shown by a long memorial adopted by the Oregon legislature in October 1880, a few months after the conviction of several Oregon cattlemen of trespassing on the Malheur Reservation. After reciting the well-known facts about the establishment of the Malheur Reservation, the Bannock War of 1878, and the removal of the rebellious Indians to Yakima, the memorial called attention to the fact "that the mass of the population of Grant and Baker counties, wherein said Malheur Reservation is located, are engaged in the business of stock raising, and most of the lands of said reservation being entirely ***uninclosed***, and eminently adapted to

Meanwhile, Rinehart, a target for vilification while he was standing by in Oregon, could do no more than report to the Commissioner of Indian Affairs the continuance of encroachments upon the reservation and the trend of public opinion in the Pacific Northwest in respect of the ultimate disposal of the Malheur Reservation.[45] Of abuse he endured a goodly share, a part of which he reported to the Commissioner in Washington. One illustration of how he was belabored must suffice.

On July 16, 1880, soon after being convicted of trespassing on the Malheur Reservation, J. S. Miller wrote a letter to Rinehart, apologizing in a left-handed way for a short letter he had earlier written "in the heat of passion." He now announced that he was moving his cattle off the "sacred soil" of Malheur, but he wished Rinehart to know that cattle and horses are not smart enough "to understand that it is wrong to cross imaginary lines, or air lines or small streams," and for that reason he wished to know what sort of terms he could make with the "Noble Red Man" so that he would not be further molested. He thought that he might pay the Indians as much as $100 a year for grazing privileges, even though they had murdered his relatives and stolen his property, for after all he was only a white man—only an American citizen—good for nothing but "to pay taxes & vote." "Oh," he groaned, "what a magnanimous Government we live under. Oppression is the order of the day, as against the Taxpayer."[46] Nor was Rinehart yet done with Miller, even though the latter presently sold his band of cattle for $39,000; for at the dictation of Miller and other cattlemen, as Rinehart believed, the *Grant County News* (Canyon City, Oregon), on August 4, 1880, published an editorial in which "Carl Schurtz" was upbraided, the management of the Malheur Reservation was condemned, and the people of Grant County were alleged to have been "grossly and sorrowfully abused."[47]

While events were running their course in eastern Oregon, the Commissioner of Indian Affairs in Washington, though he had recommended that the Malheur Reservation be discontinued, was firmly resolved, as late as the autumn of 1881, that the lands of this reservation should be disposed of for the benefit of the Indians for whom they had originally been set aside. Accordingly, he disapproved a memorial of the Oregon legislature praying that these lands be restored to the public domain, and he recommended that the Interior Department withhold its approval of any plan to dispose of them that did not "contemplate and provide substantial return to the Indians."[48] But presently he was to learn that he had spoken out of turn. The spirit that informed the pressure exerted upon the White House for the restoration of these lands to the public domain is perhaps accurately illustrated by an editorial that appeared in the spring of 1882 in a Boise, Idaho, newspaper. Remarked the *Idaho Weekly Statesman:*

> Some of our Oregon exchanges say that an order has been made requiring all cattle to be driven off the Malheur Indian Reservation. Ever since the Bannock War, in 1878, there has not been an Indian or an agent on this reservation, and there is not to-day an Indian

grazing purposes, the stock of the settlers of necessity encroach on the same and thereby create expensive litigation between the United States and said settlers." Furthermore, the memorialists alleged, there were "large tracts of land embraced within said reservation suitable and adapted to the purposes of agriculture," which lands, "now unused and unproducing," the "hastening march of immigration demands" should be opened to settlement by pioneers. Oregon *Session Laws, 1880*, 180–182. For some observations on encouragement alleged to have been given trespassers on the Malheur Reservation by the "Oregon delegation in Congress," see W. V. Rinehart's letter to the Commissioner of Indian Affairs, Apr. 17, 1882, in the Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 192–197.

[45] As might have been expected, encroachments on the Malheur Reservation became worse after 1880. The list of intruders submitted by Rinehart to the Commissioner of Indian Affairs on Apr. 17, 1882 was little less than a roster of prominent stockmen of eastern Oregon. It included the important firms of Todhunter and Devine, French and Glenn, and Overfelt and Sweetzer. Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 192–197. See also Rinehart's letter to the Commissioner, July 7, 1882, *ibid.*, p. 230–232.

[46] Rinehart to the Commissioner, July 24, 1880, with copy of Miller's letter enclosed, Incoming Letters, Oregon, R750 (1880); and Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 13–16.

[47] Rinehart to the Commissioner, Aug. 20, 1880, enclosing an editorial from the *Grant County News*, Incoming Letters, Oregon, R875 (1880); Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 44–45. For an interesting letter by J. S. Miller, written in "Douglas County, Jan. 22, 1881," see the *Willamette Farmer* (Salem, Oregon), Feb. 4, 1881.

[48] Office of Indian Affairs, *Report, 1881*, lxvi. For the memorial referred to by the Commissioner, see footnote 44.

within a hundred miles of the reservation. There is no more probability of the Piute Indians going back to the Malheur Reservation to live than there is of their going to Alaska. The Piute Indians joined the Bannocks in the Bannock war on account of the maladministration of the agent on that reservation. Since then the Christian Indian Ring in New York have used this reservation as a good hiding place for stealing.... The order to drive the cattle off this reservation is just as sensible as it would be to order the cattle all driven off the public lands of the Government. Is the Christian Indian Ring and their Christian agent afraid the cattle will eat up all the grass?... The cattle that happen to roam over the Malheur reservation do no more harm than the wild goats on our mountain peaks.... We hope the Government has not made so silly an order; but we are prepared to believe any crookedness that may be published about the Malheur reservation.[49]

In his annual report for 1882, the Commissioner of Indian Affairs, after observing that an executive order of September 13, 1882 had restored the greater part of the Malheur Reservation to the public domain, explained his own surrender in words that must have seared his tongue. After repeating what he had written on this subject in his report for 1881, and after affirming once again that ever since it had been determined to abandon this reservation it had been the intention of his office to see to it that the lands thereof should be disposed of for the benefit of the Indians for whom this reserve had been set apart, he confessed that

in response to the most urgent and persistent appeals on the part of the people of Oregon for the restoration of these lands to the public domain, in order that they might become subject to settlement under the homestead and preemption laws, this office was led to so far modify former recommendations as to reduce the quantity to be retained and sold for the benefit of the Indians to considerably less than one-quarter of the whole reservation, and to recommend the reduction of the reservation accordingly. It was upon this recommendation, concurred in by the department, that the order for the reduction was made.[50]

This concession, however, was only a beginning. On May 21, 1883, another executive order restored to the public domain the entire Malheur Reservation except 320 acres, and still another such order, dated March 2, 1889, restored this parcel.[51]

Before the Malheur affair had been finally disposed of, trouble for the Indian Office had begun in Washington Territory. For many years it had been the practice of both cattlemen and sheepmen to pay a small fee for the privilege of grazing their livestock on the Yakima Reservation, and by this arrangement both the stockmen and the Indians had profited. In fact, the money thus obtained had been spent on improvements for the benefit of the Yakima Indians.[52] Trouble appears to have begun with the expiration on July 1, 1885, of an agreement that Snipes and Allen had made with these Indians to pasture 1,000 head of cattle on their reservation. These men were accused of pasturing more cattle than their agreement permitted, and on September 22, 1885, they were ordered to remove their cattle forthwith from the Yakima Reservation.[53] A few months later a special agent, William Parsons, was complaining of a plague of trespassing sheep, numbering from 20,000 to 40,000 head, upon this reservation. Many of them belonged to ranchers living near the reserva-

[49] " 'Lo'—The Malheur Reservation," *Idaho Weekly Statesman* (Boise), Mar. 18, 1882. The "silly order" was no doubt the order of the Commissioner of Indian Affairs, dated Dec. 13, 1881, which W. V. Rinehart mentioned in his letter to the Commissioner, Apr. 17, 1882. Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 193.

[50] Office of Indian Affairs, *Report, 1882*, lxxii.

[51] *Ibid., 1883*, 224; *ibid., 1889*, 479. An interesting sidelight is thrown on the whole affair by an editorial, "The Malheur Reservation," in the *Idaho Weekly Statesman* (Boise), July 14, 1883: "On the 21st of May last the president issued an order restoring to the public domain the Malheur reservation except 320 acres, on which the old military post of Camp Harney stands ... and settlers may choose homes from any part, except the section on which the post stands, and that will probably be open to settlement as soon as Uncle Sam removes his buildings, and he will probably be saved that trouble, as the settlers are in a fair way to remove them for him. We are reliably informed that the choice portions of the reservation are already located."

[52] Office of Indian Affairs, *Report, 1878*, 141; Charles H. Dickson to the Commissioner of Indian Affairs, June 28, 1886, Incoming Letters, 17598 (1886).

[53] Timothy A. Byrnes to Snipes and Allen, Sept. 22, 1885, Incoming Letters, L1484 (1886). The grazing privilege of Snipes and Allen appears to have been later renewed, for the Indian Office, in a telegram dated June 22, 1887, thus instructed the Yakima agent: "You may receive the one thousand dollars tendered by Snipes and Allen for pasturage to July first next, and pay same into depository to credit of the Indians." Land Division, Letter Book 161, p. 28. See also Office of Indian Affairs, Letter Book 160, p. 338–340.

tion, but some of them were owned by Oregon sheepmen.[54]

That the problem of trespassing cattle and sheep at Yakima became more acute as the months went by there is little reason to doubt. On May 7, 1888, the Commissioner of Indian Affairs referred to Thomas Priestly, Yakima agent, a complaint that settlers living near the Yakima Reservation had sent to C. S. Voorhees, delegate from Washington Territory. These settlers objected strenuously to the practice of letting the Indians on the reservation round up the trespassing cattle and charge the owners thereof a dollar a head on the ground that the Indians took advantage of this opportunity to steal cattle. After making an investigation of this matter, the Acting Commissioner of Indian Affairs informed Voorhees that the complaint was without foundation. In fact, he presented evidence to show that the ranges outside the reservation were virtually depleted and that cattlemen had turned their stock loose with the expectation that they would "go to graze on the Indian lands." Furthermore, he was convinced that the Indians had not injured any stock belonging to white men.[55] But tranquillity had not yet come to the Yakima Reservation. Having received further complaints, in February and March 1889, of trespassing cattle on this reservation, the Acting Commissioner directed the Yakima agent, on June 6, 1889, to remove all such cattle and to warn the owners thereof that legal action would be taken against them if they did not adopt adequate measures to prevent a recurrence of such trespasses.[56] Yet such warning was of little avail, for two years later the Yakima agent was again harping on this subject. "Another source of complaint [he wrote] is the stock on the reservation belonging to the whites. As these questions must be settled by the courts and the Indians seem to have lost all confidence in the courts doing anything to assist them, it is very difficult for the agent to prosecute a case successfully, depending as he does and must altogether upon the Indians for witnesses, as the Indians say, 'White man's court no good for Indian.' "[57]

In the meantime, similar happenings were disturbing the tranquillity of the Nez Percés. From the early 1870s to the middle 1880s we get an occasional glimpse of trespassing stock on the Lapwai Reservation,[58] but it was not until the closing years of the 1880s that the annual reports of the agents began to reveal a special concern about stockmen's encroachments. Failing ranges outside this reservation no doubt account for the remarks with which the Nez Percé agent began his annual report on August 20, 1888:

> This reservation is bounded on the north, west, south, and east by a wide and almost boundless extent of rich, productive agricultural land, nearly all of which, except upon the east, has been taken up by settlers, that bordering on the reservation being in the possession of those whose principal pursuit is stock-raising. Their flocks and herds naturally seek pasturage upon the reservation, where grass and water is both good and abundant. . . . White settlers and speculators are thus profiting while the Indians are losing the benefit derivable from the use of their rich grazing lands. . . . It is impracticable with a force of but five policemen to protect from encroachment a reservation the exterior lines of which measure about 150 miles, and properly attend to other police duties, while the public sentiment of the country surrounding it ignores such treaty obligations of the Government as interfere with the appropriation of Indian rights by white settlers.[59]

The following summer, in compliance with a government order, "most of the stockmen" in the vicinity of the Lapwai Reservation were reported to be removing their cattle from the lands of the Indians; but in his annual report, dated September 15, 1890, the Nez Percé agent confessed that the "stock question" was one of the "most perplexing questions" that confronted him. With his limited police force he had been unable to clear the reservation of intruding cattle, and he was at a loss to know what to do about the matter.[60]

Besides such large-scale encroachments as those just described, other illegal practices, less obvious

[54] William Parsons to the Commissioner of Indian Affairs, Sept. 11, 1886, Incoming Letters, L25228 (1886). See also Charles H. Dickson to the Commissioner of Indian Affairs, June 28, 1886, in 17598 (1886).

[55] Commissioner of Indian Affairs to Thomas Priestly, May 7, 1888, Land Division, Letter Book 173, p. 237; Acting Commissioner of Indian Affairs to C. S. Voorhees, June 25, 1888, in *ibid.*, Letter Book 175, p. 142–143.

[56] Acting Commissioner of Indian Affairs to Thomas Priestly, June 6, 1889, Land Division, Letter Book 185, p. 313–314.

[57] Office of Indian Affairs, *Report, 1891*, 1: 462.

[58] *Idaho Signal* (Lewiston), June 29, 1872; Charles E. Montieth to the Commissioner of Indian Affairs, Dec. 7, 1885, Incoming Letters, 30044 (1885).

[59] Office of Indian Affairs, *Report, 1888*, 85.

[60] Lewiston *Teller*, June 27, 1889; Office of Indian Affairs, *Report, 1890*, 81–82.

and perhaps on occasions even ingenious, were resorted to by stockmen of the Pacific Northwest to gain access to Indian grasslands. One such practice was that of driving herds across reservations and of allowing the stock to proceed so leisurely that they could grow fat as they traveled. The government acknowledged the right of stockmen to move their herds, free of charge, at normal driving pace on established trails and roads across Indian reservations, but stockmen who abused this privilege by allowing their stock to range and feed on a reservation were liable to a penalty of a dollar a head on their stock, such penalty to be "recoverable by process at law."[61] Still another practice, reported by the Nez Percé agent, was that of men who profited by their presence on the Lapwai Reservation as keepers of taverns or of mail stations to pasture herds on that reservation. All such persons were ordered, in 1889, to be removed forthwith.[62] Still another devious practice, more widespread perhaps than the evidence in hand would indicate, was that whereby a stockman would make an agreement with a reservation Indian to look after such stockman's cattle that grazed on the reservation. On September 18, 1890, the Yakima agent reported such an arrangement that Pleas Bounds, a stockman of North Yakima, had made with Tom McKay, a half-breed Indian, whereby Bounds was unlawfully pasturing from 1,500 to 2,000 head of cattle on the Yakima reserve. The agent wrote:

> These cattle, of course, are branded with McKay's brand, and, ostensibly, Bounds holds McKay's notes for the cattle, and as fast as Bounds and a partner need the cattle for their butchering business at Roslyn and Tacoma, they are gathered up by McKay and shipped to them. The scheme is such that Bounds avoids paying taxes on the cattle to the county authorities of Yakima, and the Indians are likewise deprived of a large revenue under the 'grazing tax.'[63]

A similar arrangement, but one that was sought openly, had been refused two years earlier to a man who wished to pasture cattle on the Colville Reservation.[64]

The height of ingenuity was approached, if not actually attained, by certain white men who conceived the idea of marrying their way into the Indian grasslands. At least some squaw men professed to believe that through their wives—dark-haired and dusty-hued Indian maidens—they had acquired, by what might be called *klootchman* dowry right, a share in the natural resources of an Indian reservation. In 1889 the attention of the Indian Office was called to the fact that white men, married to Colville Indian women and living off the Colville Reservation, had been driving their cattle upon that reservation under the pretense of having sold such cattle to their wives; and, at the same time, the Indian Office was also informed that some Indians of Chief Tonasket's band had sold land claims to Indian women, "the wives of white men," such lands to be used by the husbands of these women for pasturing cattle. Both these practices the Indian Office condemned: the first on the ground that no squaw man had any rights in an Indian reservation and could remain thereon only "on sufferance during good behavior," and the second on the ground that no reservation Indian could transfer any land claim to another Indian. All the cattle that had been put upon the Colville Reservation by either of the foregoing arrangements were ordered to be removed forthwith.[65]

Thus far our story has shown a harassed Indian

[61] Acting Commissioner of Indian Affairs to B. P. Moore, May 6, 1887, Land Division, Letter Book 159, p. 351–352. See also Commissioner of Indian Affairs to Thomas Priestly, Mar. 14, 1877, in *ibid.*, Letter Book 157, p. 194–195.

[62] Commissioner of Indian Affairs to George W. Gordon, Nov. 12, 1889, Land Division, Letter Book 191, p. 223–224.

[63] Office of Indian Affairs, *Report, 1890*, 233. In this same report the agent affirmed that the principal employment of his Indian police had been to "prevent illegal pasturage by stockmen, who use fair means and sometimes foul to herd their cattle, horses, sheep, etc., on the rich pasture lands on some portions of the reserve." *Ibid.*

[64] Acting Commissioner of Indian Affairs to R. D. Gwydir, Aug. 3, 1888, Land Division, Letter Book 176, p. 232.

[65] Acting Commissioner of Indian Affairs to Hal J. Cole, Nov. 6, 1889, Land Division, Letter Book 191, p. 89–90. Devices such as those described herein were, of course, not confined to the Pacific Northwest. On the subject in general of intrusions by whites on Indian reservations, the Commissioner of Indian Affairs, in his *Report, 1878*, xliv–xlvi, gave an informing account. "The squaw-men," he wrote, "assume that by marriage they have all the rights of full-blooded Indians, and they endeavor to exercise these rights not only in the possession of cattle themselves, but also in ranging and pasturing upon Indian reservations large herds belonging to other white men; and when the removal of such cattle is attempted by the agent, the squaw-men claim property in them under fictitious bills of sale." *Ibid.*, xlv.

Office and suffering Indian agents struggling to keep law-breaking frontiersmen from laying hold of what was not their own. But there is another side to the story. It is time to inquire whether the policy the Congress imposed on the Indian Office was such that it could not be carried out by that office, even when it was served by honest and capable agents.

An Indian reservation, let it be remembered, was a government-owned refuge, either surrounded by or contiguous to other government-owned land that was destined, sooner or later, to be occupied by white men—men who had been disciplined in the school of acquisitiveness, men who were disdainful of the rights of Indians, men who were not altogether respectful of the rights of their own government. Ordinarily such men were not much given to making subtle distinctions. In general, the distinction between government-owned land that they could freely use and government-owned land that they could not use because some Indians were not yet exterminated impressed them as being a lawyer's distinction—that is, a distinction without a difference. What impressed them most of all was their knowledge that cattle which lived out their lives with half-empty bellies made poor beef. To formulate a reservation policy adequate to the exigencies of so difficult a situation, and to administer that policy successfully, required of all government agencies concerned courage and hard-boiled realism—characteristics which, perhaps more often than not, such agencies did not possess. The problem, moreover, was one that admitted of no dilatoriness, if justice were to prevail; it would not wait while Indians, who could not vote, were learning humility, and while cattlemen, who could vote, were acquiring perspective. To the shortcomings of the Indian policy we must now give some attention.

Generally speaking, the Indian reservations in eastern Oregon, as elsewhere in the Pacific Northwest, were larger than they should have been.[66] This is a fact, however heartless it may be. To say that the Indians who were put upon these reservations got little enough for what they gave up is to utter a truth that is practically unimportant. In the long run, the white men, not the Indians, determined what was just for the Indians. Accordingly, the Indians retained, willingly or not, only so much of their lands as the white men were willing for them to keep. The frontiersmen, of course, were not without ideals. Having exposed themselves to the rigorous life of the Far West, they were desirous of making full use of what the Lord had provided, and of employing their talents to help build up the country;[67] but their idealism,

[66] The attitude of the people of the Pacific Northwest on this subject informs not a few of their legislative memorials to the Congress. Between 1874 and 1885, the Oregon legislature memorialized the Congress at least twice on the subject of the Umatilla Reservation. The first of these, adopted in October 1874, asked that the Umatilla Indians be removed to the Lapwai Reservation and that the Umatilla Reservation be opened to settlement "at an early period." The second one, adopted in January 1885, urged that the "surplus" lands of the Umatilla Reservation be thrown open to settlement. The legislature of Idaho Territory, in its session of 1884–85, petitioned the Congress, first, to apportion a part of the Lapwai Reservation to the Nez Percé Indians in severalty and to open the remaining part to settlement, and, second, to restore to the public domain all such lands of the Fort Hall Reservation as the Indians living thereon were not actually using. Also, in its session of 1888–89, the Idaho legislature memorialized the Congress to curtail both the Lapwai and the Coeur d'Alene reservations. In Washington Territory memorials adopted by the legislature between 1871 and 1888 called for a reduction of the Yakima Reservation (1871), for the concentration of all the Indians of eastern Washington on one reservation in the Colville Valley (1877), for the breaking up of all the Indian reservations and the giving of a quarter section of land in severalty to each Indian (1883), for the offering to the Yakimas of "liberal allotments of land in severalty" (1886), and for the vacating of the Colville Reservation, the Indians thereon to be offered "liberal allotments of land in severalty" (1888). The continued shutting off of the rich natural resources of the Colville Reservation from development by white men, the last-mentioned memorial averred, "will become a serious drag on the future progress of the Territory." The sentiment informing the memorial of January 1886, with respect to the Yakimas, revealed uncommon generosity, for that memorial asked that allotments in severalty to those Indians be not only liberal but that the remaining part of the reservation "be sold to actual settlers, . . . the proceeds of such sale to be placed to the credit of the Indians and disbursed in such manner as shall be deemed most prudent to promote their education and qualification for all the duties of citizenship." Oregon, *Session Laws, 1874*, 249–250, *ibid., 1885*, 507–508; Idaho, *Session Laws, 1884–85*, 209, 212–213, *ibid., 1888–89*, 74–75, 80–81; Washington, *Session Laws, 1871*, 215, *ibid., 1877*, 437–438, *ibid., 1883*, 434–436, *ibid., 1885–86*, 527–528, *ibid.., 1887–88*, 270–271.

[67] A petition to the President of the United States, signed by many leading citizens of eastern Oregon, as early as the spring of 1878, illustrates admirably the

by some odd quirk of human nature, was understood no better by philanthropists who observed it from the eastern cities than by Indians who studied it at close range in the Far West. Knowing that a conflict of ideals obtained, the government of the United States, by setting aside for the Indians more land than they could use, in a country open to white men whose land-hunger was insatiable, was asking for trouble. With reservations ill-defined and ill-guarded, it is little wonder that now and again an efficient cattleman, fearful lest a single blade of grass outside a reservation should go to waste, put his cattle where, if they were perverse, they could conceivably wander across indistinct lines to reservation grasslands. Such an act he might do, either innocently because he knew not where the lines should be, or, under severe provocation, maliciously because he suspected that he could not be prevented from doing so.

The problem of protecting the reservation grasslands was further bedeviled for the reason that neither the Indian Office nor honest stockmen could count much on cooperation from the cattle. There is no denying the sharpness of the point to J. S. Miller's insinuation that it would have been difficult for Oregon range cattle, whose I. Q.'s were perhaps not noticeably higher than those of the Texas longhorns, to master the United States Statutes at Large and to abide by them; and thrifty Oregon cattlemen naturally would object to spending time and money to teach their cattle to make distinctions which sometimes Indian agents could not make.[68] The government, they thought, should long before have learned to use common sense. Had the government in the beginning made the reservations smaller, and had it at once carefully staked off their boundaries, the problem of policing them should not have been an impossible one. By thus minimizing temptation for cattlemen, the trespassing of cattle on Indian reservations in the Pacific Northwest should not have become a problem of great consequence, and the embarrassing truth about the intellectual and ethical shortcomings of Oregon cattle might never have leaked out.

The neglect of the government to establish precise boundaries for the Indian reservations, besides causing much discord between Indians and cattlemen in the Oregon Country, opened the way to considerable "chiseling" by stockmen; for encroachments on reservations, once started, were not easily stopped. Such neglect—neglect that caused trouble elsewhere than in the Pacific Northwest—was, it appears, due to the niggardliness of the Congress. In 1883 the Commissioner of Indian Affairs, deeply discouraged, gave vent to his feelings on this subject when he wrote:

> It would seem that the experience of the last few years had demonstrated the utter futility of endeavoring to procure adequate appropriations for the survey of Indian reservations. Year after year proper estimates are prepared and submitted to Congress with the most urgent recommendations. . . . There are thousands of miles of reservation boundaries that have never been defined and marked by official survey. . . . The settlers, miners, or herders, as the case may be, approaching from all directions, and gradually circumscribing the Indians to the vicinity of their agencies, are finally confronted by the Indians or their agent with the warning that they are encroaching upon the reservation. This, in all likelihood, is disputed, and in the absence of proper marks indicating the boundaries of

thought of frontier Americans with respect to their own rights as against those of the Indians. This petition was accompanied by a letter from John H. Mitchell, Senator from Oregon, to Carl Schurz, Secretary of the Interior, dated May 11, 1878, urging that the prayer of the petition be granted. The petition desired that the President, by executive order, "Make the dividing *mountain range* which separates the waters of the Malheur River from those flowing into Harney Lake Basin the west line or boundary of the Malheur Reservation." Such a change would open to settlement the Harney Lake Basin and the Silvies River Valley. The petitioners frankly admitted that some "settlers are now living upon this part of the reserve and have been so for years past," and that, if they should be "expelled by the military, many homes will be broken up and much distress occasioned." "Our citizens," the petitioners affirmed, "need this section for settlement; as a highway to market; as a resting and recruiting place for their stock in transit; and as a place for homes where they can add to the development of our country and the increase of our wealth." Office of Indian Affairs, Incoming Letters, Oregon, M817 (1878). An earlier petition of citizens asking for the same thing was disapproved by the Malheur agent, Sam B. Parrish, in a letter to the Commissioner of Indian Affairs, Nov. 25, 1875. Major John Green, commanding Camp Harney, endorsed Parrish's view. Incoming Letters, P1 (1876).

[68] As late as July 7, 1882, six years after he had taken charge of the Malheur Reservation, W. V. Rinehart was obliged to tell the Commissioner: "I never have claimed to know, nor do I now know, where the reservation line passes, in the vicinity of the Little Malheur. . . ." Malheur Agency Letter Book, June 14, 1880–July 18, 1882, p. 229.

the reservation the dispute continues, engendering the bitterest feeling which too often ends in unfortunate strife.[69]

We have already noted that at Warm Springs the want of clearly marked boundary lines produced embarrassment.[70] Nor was this an isolated instance in the Pacific Northwest. As late as the autumn of 1886, official word came from the Yakima Reservation that unsettled boundaries had there given rise to no end of disputing. "There is but one portion of the reservation that is well defined," wrote the special agent, Charles H. Dickson, on November 9, 1886, "that portion of the northern and eastern line bounded by the Yakama [*sic*] and Ahtannum Rivers. The other boundaries are in dispute, giving rise to endless trouble to agent and Indians. As the country adjacent to this reservation is rapidly settling up the trouble will constantly increase."[71] As late as 1890, the boundary of the Yakima Reservation was still a subject of concern, for on September 18 of that year the Yakima agent reported that "Surveyor Swartz, of the surveyor-general's office of this State, is now in the field surveying the boundary of this reservation, a work very much needed on account of the constant disputes arising between stockmen of Klickitat County and my Indians, as to the boundary lines, a portion of which has never been surveyed, and many of the landmarks of the surveyed part have been obliterated."[72]

Meanwhile, on the Klamath Reservation the boundary question had become one of even greater concern to the Indian Office. Here since the survey of 1871 there had been a dispute about the boundary, a dispute which, in July 1886, all but caused bloodshed, for white men had built barbed-wire fences on land the Indians claimed as their own.[73] In this case action followed rather quickly the recommendation of the Commissioner of Indian Affairs who, in October 1886, advised a resurvey of this reservation in accordance with the provisions of the treaty of October 14, 1864. In his report for 1887, the Commissioner announced that, after investigation, it had been decided to leave the boundary as it had been surveyed in 1871 and not to disturb the settlements made on the disputed land, "although," as he naïvely observed, "the claim of the Indians seemed to be well substantiated." "When the line is re-marked," he continued, "the military will be requested to protect the reservation from encroachments of cattlemen, concerning which the Indians have made complaints." But he did not rest his case here; he was even willing to entertain the thought that the Indians of the Klamath Reservation might be entitled to some compensation for the land they had lost by the "location" of the boundary.[74]

What was true of reservation boundaries in Washington and Oregon was more or less true of reservation boundaries in Idaho. In the last-named Territory, in 1868 and again in 1869, the surveyor general most urgently advised that the boundaries of the Indian reservations be surveyed.[75] "If these *reservation lines* are not to be considered a myth by the settler," he wrote in 1869, "they should be surveyed and permanently marked as soon as possible. The truth is, the whole Indian policy is a farce."[76] Later on, Indian agents voiced their pleas for the survey of these reservations. Thoroughly exasperated by delays, the Lemhi agent, in 1884, let go this blast: "In regard to the reservation being surveyed, that has been suggested and urged so often as to become rather monotonous. I am, however, hopeful that it will be done some time during the present century."[77] Whether this sarcasm helped the cause or hindered it, the fact is that the agent for this reservation could report in August 1887, that in "the month of June this reservation was surveyed, which has been a long-felt want."[78] Thus it appears, without our going more deeply into the subject, that the problem of reservation boundaries was not only a general one in the Pacific Northwest, but that it was a cause of considerable apprehension to many an Indian agent in that region.

[69] Office of Indian Affairs, *Report, 1883*, xvii.

[70] As late as the autumn of 1889, the boundaries of the Warm Springs Reservation had not been completely surveyed. The northern boundary, as surveyed in 1887, was accepted by the Interior Department on July 19, 1889, but in October 1889, the western boundary was still uncertain. *Ibid., 1889*, 83.

[71] *Ibid., 1886*, 246. See also the report of William Parsons, special agent, dated at Salem, Oregon, Sept. 11, 1886. Incoming Letters, L25228 (1886).

[72] Office of Indian Affairs, *Report, 1890*, 233.

[73] *Ibid., 1886*, 215.

[74] *Ibid., 1887*, lxxviii.

[75] U. S. General Land Office, *Report, 1868*, 390; *ibid., 1869*, 346.

[76] *Ibid., 1869*, 346.

[77] Office of Indian Affairs, *Report, 1884*, 65.

[78] *Ibid., 1887*, 70.

Occasionally even settlers could, in a pinch, lament the unwisdom of the government's tolerating indefinite reservation boundary lines, especially if such lament could be used to bolster their contention that Indian reservations were undesirable because they deprived them of "a large amount of grazing land." A case in point is the action taken by a meeting of settlers in Yakima City on September 17, 1878. Held for the purpose of expressing opposition to a proposed reservation for Chief Moses and his band of Indians, this meeting adopted resolutions affirming, *inter alia*, that such reservation would be marked by "no well defined lines," with the result that there would be unending conflict between "whites and Indians in regard to stock trespassing on each other's lands."[79]

From the subject of Congressional neglect in respect of one matter, we now pass on to the subject of Congressional neglect in respect of another, and perhaps more important, matter. Through all the years covered by this study the Congress withheld its sanction of a practice which, according to the testimony of competent persons, would have gone far toward solving the problem of encroachments by stockmen on Indian reservations. From reservation after reservation in the Oregon Country, beginning with the year 1878 and continuing to at least the year 1890—the final limit of this study—came word that not only were the Indians eager to lease their surplus lands for grazing purposes, but that there were substantial stockmen who were equally eager to enter into leases with them for such purposes. On December 3, 1878, the Klamath agent advised the Commissioner of Indian Affairs that the Klamath Indians were desirous of renting a part of their reservation to stockmen, a desire of which he approved, provided that "the right kind of white man" would enter into a lease with them for a seven-year period and pay for his grazing privilege $500 a year.[80] In May 1878, the Malheur agent received two requests from cattlemen to lease a part of the Malheur Reservation. The first offer was from Todhunter and Devine, a large firm which desired to lease for 15 years, at the rate of $200 a year, an area of about 500 square miles on which some 3,000 head of their cattle were then trespassing. Rinehart thought that the price offered was ridiculously low, but, in order to avoid further trouble, he advised the leasing to cattlemen of the part of the reservation they desired, provided that they paid "a reasonable price for its use."[81] Two days after reporting this offer, Rinehart informed the Commissioner of Indian Affairs that another and a better offer to lease the same tract had been made by J. W. Scott, of Camp Harney, who was willing to pay for the privilege $1,500 annually for a term of 5 years. Rinehart strongly advised the acceptance of this offer, in part no doubt because he thought it might stop a movement then under way to have a large area which embraced that of the proposed lease separated from the reservation and restored to the public domain.[82] During the next two years other requests to lease reservation lands, some for the grazing of cattle and others for the grazing of sheep, were received in Washington from the Malheur, the Umatilla, the Klamath, the Yakima, and other reservations in the Pacific Northwest.[83]

The subject of leases, however, remained in unstable equilibrium. The Commissioner of Indian Affairs, though he clearly saw the advantages of leasing Indian grazing lands to dependable persons, was stopped by law from approving even informal agreements by means of which cattlemen might exploit reservations to the profit of themselves and of the Indians concerned. Nevertheless, as the Commissioner confessed in 1884,

> some few agreements of the character mentioned have been entered into by certain Indian tribes on their own responsibility, from which the Indians are drawing more or less pecuniary benefit. These agreements, however, have not received the approval of the Department. . . . It is very desirable that Congress should put this much vexed question upon a proper basis, so that Indian lands not necessary for other purposes may be made a source of income to the Indians under such rules and regulations as the Secretary of the Interior may prescribe.[84]

If there had been any doubt as to the legality of leasing reservation lands, that doubt for the time being at least was set at rest by the United States Attorney General, in an opinion handed down on

[79] Incoming Letters, W2064 (1878).

[80] Incoming Letters, Oregon, R866 (1878).

[81] Malheur Agency Letter Book, Dec. 17, 1877–Sept. 30, 1878, p. 150–152.

[82] *Ibid.*, 154–157. See footnotes 34 and 67.

[83] Oregon, R451 (1879), F163 (1880), 11187 (1884), 1190 (1884), L25228 (1886); Land Division, Letter Book 160, p. 363–364; "Leases of Lands in the Indian Territory," 48 Congress, 2 session, 1883–85, *Senate Executive Document 17*, 200–202, 216–219, 219–220.

[84] Office of Indian Affairs, *Report, 1884*, xiv.

July 21, 1885. This opinion, as summarized on May 31, 1887, by the Commissioner of Indian Affairs in a letter to an Oregonian who had expressed a desire to lease a portion of the Siletz Reservation, held that

> Indian nations and tribes are precluded by the force and effect of the Statute (Section 2116, Revised Statutes) from alienating or leasing any part of the reservation, or imparting any interest or claim thereto, without the consent of the Government of the United States, previously signified by treaty provisions or statutory enactment, and that in the absence of any such authority, neither the President, the Secretary, nor any other Officer of the Government has power to make, authorize or *approve* any leases of lands made by Indian tribes.[85]

From 1885 onward, year after year, the Commissioner of Indian Affairs urged in his reports that legislation be enacted to authorize the leasing of Indian grazing lands "under proper restrictions"; but as late as 1889 he rather grimly remarked that, "so far, Congress has not seen fit to enact the necessary legislation."[86] Nevertheless, while the Congress was procrastinating, cattlemen were acting. As the Commissioner observed in 1888,

> So long as grazing lands are increasingly in demand, and there is no law prohibiting the use of Indian lands for grazing purposes, cattle owners will continue to make arrangements with Indians for obtaining grazing privileges; and so long as there is no law authorizing such arrangements the Department can give no approval thereof. Consequently such leases, although they involve large property interests and oftentimes closely affect the welfare of the Indians, have no legal standing.[87]

Here, indeed, was the nub of the matter. Every agreement by which cattlemen grazed their herds upon Indian reservations was extralegal, if not downright illegal; hence neither party to such an agreement was liable for the nonfulfillment of a contract.

That grazing leases, if properly drawn, could have been used to prevent cattlemen from trespassing on Indian reservations is abundantly proved by an agreement entered into on November 1, 1884, between Linus M. Nickerson, Klamath agent, and Matt Obenchain, a large-scale cattleman of Klamath County, Oregon, whereby Obenchain, in consideration of the sum of $300 per annum, payable semiannually, was to be allowed to graze as many as 500 head of cattle on a part of the Klamath Reservation for five years. Obenchain specifically bound himself to see to it that, during the time of the agreement, the cattle of all other white men were kept off the tract that he had leased. But the Commissioner of Indian Affairs disapproved this agreement, on the grounds that leases of Indian reservation lands could not lawfully be made, and that grazing privileges could be granted only by "proper authority of the tribe."[88] Even without so specific an obligation as Obenchain was willing to take, it may be presumed that every cattleman who leased reservation grazing lands would protect the right he was paying for by seeing to it that no white man's cattle, other than his own, grazed on the land that he had leased.

Again and again Indian agents in the Pacific Northwest affirmed that authorization "to receive cattle for pasturage" on reservations would be beneficial to the Indians whose lands would be so used, but never was such affirmation more forcefully made than by a Nez Percé agent who, on August 20, 1888, wrote to the Commissioner of Indian Affairs that such authority would enable him to give employment to his Indians as herders and to convert to the use of all those under his care "a source of revenue that would . . . do much towards settling them down upon their allotments and otherwise materially improve their condition with less direct aid from Congress."[89]

Rather unusual, perhaps even unique, was the reason the Yakima agent gave in 1886 for wishing to lease a part of the reservation for which he was responsible. He advised that the borders of the Yakima Reservation be leased for the grazing of

[85] J. D. C. Atkins to John Bones, May 31, 1887, Land Division, Letter Book 160, p. 363–364.

[86] Office of Indian Affairs, *Report, 1889*, 30.

[87] *Ibid., 1888*, xxxix–xl. In October 1889, the Commissioner of Indian Affairs wrote: "In order to overcome in a measure this difficulty, and to enable the Indians to receive some benefit from the spontaneous products of their lands, the Department has authorized several tribes to take a limited number of cattle to herd and graze upon the reservations at a stipulated price to be paid by the owners of the cattle to the United States Indian agent for the benefit of the tribe." *Ibid., 1889*, 30–31.

[88] "Leases of Lands in the Indian Territory," 48 Congress, 2 session, 1883–85, *Senate Executive Document 17*, 217–219.

[89] Office of Indian Affairs, *Report, 1888*, 85.

sheep in order to provide, besides an income for the Indians, an effective "fence" for keeping white men's cattle off, and the Indians' cattle on, the reservation.[90] His proposal, had it been adopted, would have produced the desired effect, for the reason, as every stockman knew, that neither horses nor cattle would ordinarily remain on land where sheep had recently grazed.[91] But binding leases could no more be made for this purpose than for any other purpose. As late as 1890, the Congress had not granted general authority to lease lands on Indian reservations.[92]

The failure of the Office of Indian Affairs to protect the Indian reservations in the Pacific Northwest from the encroachments of cattlemen was caused as much by the defects of governmental policy as by the ruthlessness of the cattlemen. The problem of such encroachments was general, not regional. Cattlemen in Oregon, Washington, and Idaho were presumably no better and no worse than cattlemen elsewhere in the Far West. Taught by long experience, the Congress should have known well the traits of the frontier mind and should have acted in accordance with such knowledge. By putting temptation in the way of western cattlemen, and then by neglecting to adopt measures to offset such temptation, the Congress imposed upon the Office of Indian Affairs a problem which that office could not solve.

[90] Charles H. Dickson to the Commissioner of Indian Affairs, June 28, 1886, Incoming Letters, 17598 (1886). On Sept. 28, 1886, the Commissioner submitted this request to the Secretary of the Interior. Land Division, Letter Book 152, p. 275–276.

[91] Recently an able student has maintained that the widespread belief that sheep "tainted" the grass so that cattle would not eat it had no basis in fact. Edward Norris Wentworth, *America's Sheep Trails* (Ames, Iowa, 1948), 523.

[92] Office of Indian Affairs, *Report, 1890*, lxxi.

## THE IMPACT OF FARM MACHINERY ON THE FARM ECONOMY

A. N. JOHNSON

*Department of Agricultural Education, State Teachers College, River Falls, Wisconsin*

The farm youth of my generation at the turn of the century grew up without the benefit of farm machinery. I recall vividly how I envied the people riding comfortably along the country roads while I was sweating it out in the hayfield or doing some other kind of hard manual labor. It never occurred to me that probably such travelers were driving around on business, perhaps earning their livelihood as salesmen. I saw them only as a leisure class, a class of drones who earned their living without manual labor.

Now that I am approaching the age of sixty, after a lifetime of work in agricultural management and teaching, I am beginning to be concerned over what to do with my leisure when the time comes to retire. It seems from my present vantage point that it may be more difficult to get along without work than to be happy at leisure. It is a notable fact that retired farmers are, as a rule, not adept in the enjoyment of leisure after a lifetime of hard work. Too often, instead of killing time, they kill themselves.

The constant dream of the young man on the farm about 1900 concerned the elimination of much of the manual labor of farming. At that time we were not too far removed from the hoe in many respects. The farm motors, electric and internal combustion engines, had not as yet found their way to the farm. The cream separator and washing machine were cranked or pumped by hand. Instead of purchasing automatic rowing machines, city folks anxious to keep physically fit, might well pick up one of those old bearing-less cream separators for exercisers. The farm manure was loaded and spread with the pitch fork, and many a gag has been built around the operation. Most of the hay crop was also loaded and unloaded with the three tined fork, although the old Rock Island hay loader had made its debut. It did relieve men of the task of pitching the hay onto the load, but as the rakes of the loader pushed the long wiry timothy hay of that day onto the wagon, it wound itself up as so much manila rope. Many a man woke up with a hernia or hemorrhoids after lengthy tugging away under a loader. Corn was still cut largely by hand or with the homemade sled type of cutter pulled

by one horse and with no bundle tying mechanism. The corn binder had come in about this time and was used by the larger operators. It was a cumbersome machine which required a lot of horsepower, but it did do away with a considerable amount of manual labor.

Such was the machinery situation on the farm at the time that industrialization was proceeding at a rapid pace in industry. The automobile industry with its assembly line was about to enter the picture. It was no small wonder that young men were eager to leave the farm. The work was extremely hard, and the hours were long. Wages of $30 to $35 per month looked pitifully low compared to those offered in the cities. It would be impossible to hire labor with which to operate a large farm on the old basis today, and if one could find the men at current farm wages, the operator would go broke competing with the machine-operated farm. Fifteen years of New Dealing have taught men that there are other means of obtaining a living if the labor one is engaged in becomes too objectionable. The prospective farm hired hand today scrutinizes the machinery on the farm before he signs the contract. During the last three years we have been unable to hire the necessary man power with which to fill two silos by the old back-breaking method of loading and unloading green corn bundles by hand. Today machine farming is the only efficient method of operating a large farm. The farmer with the small acreage cannot justify the huge expenditures required for full machine operation, and many will likely revert to a less efficient method bordering on subsistence farming. The economic outlook for the farmer with 80 to 120 acres is not very bright as viewed from the standpoint of machine farming. In industry small-sized plants are able to survive because they can specialize to a fine degree in the manufacture of parts. Not so on the farm. Regardless of size, the farmer must grow and harvest his crops, and as a rule he must diversify to be successful.

The extent of the revolution in farming methods is familiar to anyone who has watched its development over the last quarter of a century. In the twenty-five years from 1920 to 1945, 60 percent of all the farm horses and mules disappeared from the American farms, and the present rate of their displacement is at an accelerated pace. The only sure market for a horse today is the fox farm or the soap factory. Any number of good farm horses are purchased daily by the above agencies at about 2 cents per pound. The sudden disappearance of about 16,000,000 horses in the thirties was a prominent factor in the depression of that period. By their removal the farmer lost the market for the products of about 60,000,000 acres of land which had been used for the production of horse feed. These surplus acres were diverted to increased dairy production, swine, and other products which materially affected the burdensome surplus problem. At the same time the farmer became a major customer of the petroleum industry, and the prices of their products have not fluctuated with the prices of farm products.

The change-over from horse to tractor began slowly about forty years ago. During the depression the horse threatened to come back because of the farmer's lack of purchasing power. Then came the war and the highest farm income in history. Tractors have increased from 25,000 to 2,500,000 in about thirty years. Many farmers retained one team of horses to do odd jobs, especially during the winter. Now the slogan is "Replace the last team of horses with a small second tractor." Should a lowered farm income make it difficult to replace the tractor some day, there will be no returning to horse power. The foundation stock is gone, and one does not grow colts for 2 cents per pound, when he can grow beef cattle or swine selling for 20 to 35 cents per pound. One might well ask why we have not consumed some of the young horses ourselves. Certainly they would have proved more tender meat than old derelict dairy cows which today furnish a large percentage of our beef. Perhaps we should have developed cloven-footed horses. There are so many factors involved in the economy of the horse versus the tractor that comparisons are idle in a brief article. However, some things do stand out clearly. It required about 50 bushels of oats or corn and 2 tons of hay to feed a horse for one year. At current prices the annual feed bill for a horse would purchase 400 gallons of gasoline. If farm prices drop back to the 1939 level and the petroleum shortage keeps gasoline at about today's level, the farmer would obtain only 160 gallons of gas for the price of the horse feed. Briefly stated, the horse as a source of farm power, fits into a situation of low farm prices and a plentiful supply of labor. The tractor came in when those factors were reversed during the last decade.

The invested capital in farm machinery today is tremendous. At current prices, the following represents a fair minimum of equipment and its cost

for a small-sized farm:

| | |
|---|---|
| Tractor | $1,560 |
| Plow | 243 |
| Disc | 165 |
| Cultivator | 200 |
| Drag | 60 |
| Grain drill | 400 |
| Corn planter | 200 |
| Manure spreader | 297 |
| Wagons | 400 |
| Cultipacker | 125 |
| Corn binder | 340 |
| Grain binder | 405 |
| Milking machine | 450 |
| Hay loader | 260 |
| Rake | 215 |
| Silage cutter | 660 |
| Cream separator | 205 |
| Motors | 200 |
| Mower | 140 |
| Total | $6,525 |

The above total representing cost of all new equipment represents a charge of $75 per acre on an 80-acre farm. The same equipment would operate a 300-acre farm cutting the acre cost to $21. It becomes obvious that the operator of the small farm is at a disadvantage compared to the man on the larger area. The above list does not represent a completely equipped farm in the sense that we speak of a truly mechanized farm. If we would give the farm the "New Look," we should add a field ensilage cutter and blower at about $2,000, a barn gutter cleaner at $1,500, a machine to heave the silage out of the silo for about 15 minutes per day at $650, haying equipment at $1,500, and perhaps many others. This would bring the cost up over $150 per acre, a completely unreasonable figure for efficient operation.

Many farm implements are in use for only a few hours per year. The field silage cutter and blower costing $2,500 may be used 30 to 40 hours on the average quarter-section farm; a $400 grain drill is used for 3 to 4 days. The corn binder, the grain binder, the combine, and many others are in the same category. Due to the specialized nature of harvesting machinery, it is the most expensive and also sees the least service per year. It is also true that farmers as a group have not shown the proper interest in the regular care and storage of farm machinery. Implements exposed to the weather will deteriorate more quickly than through actual usage. We are all aware of the tremendous efficiency of machinery in industrial production, but any comparison of farm and industry in this respect must take the above factors into account.

In the manufacturing plant the machine is kept busy. The actual savings of man hours may be accurately computed and the operation time required for the machine to return the original cost may be determined. It may be seriously questioned whether or not some farm machines will return their original cost in labor savings if and when we again arrive at or near parity in farm prices. The $2,500 field forage harvester, for instance, will replace about 5 men hauling bundle corn. At current wages of $125 per month and used for 4 8-hour days the savings would be $80 per year. At this rate it would require 30 years for the machine to repay the original cost without any consideration for repairs or fuel for its operation. It would be worn out long before the end of the 30-year period.

In the case of certain types of farm machinery there is not much cause for any difference of opinion as to their efficiency as now used. Tillage and planting machines as now used are well standardized and may be purchased in various sizes to fit the size of farm. The harvesting machinery is not so well standardized. In the case of certain crops like hay, various types of machines are available. One may cut, rake, and load the hay in the old conventional manner using mower, side-delivery rake, and hay loader, all relatively simple and long-lived machines. The hay crop may be field baled and placed in the barn with elevator equipment, or it may be harvested with the chopper which cuts it into short convenient lengths. The same blower which handles the cut corn forage may be used to blow the hay into the mow. A fourth method presents itself in the use of the buck rake. This is a simply constructed device attached to a tractor or a truck. It picks up 500 to 1,000 pounds of hay, carries it to the barn, and dumps it at the door to be taken up by the regular hay carrier. This is only a slight modification of the old stacker system used by our grandfathers, and on a short haul over level ground it is still one of the most efficient methods of handling hay.

The principal factor in the making of hay as far as type of machinery to use is concerned is the cost of getting it into the mow in good condition. The nutritive value is unaffected by the method used. In the case of a farmer contemplating a new barn, the use of a baler could cut the barn cost because of the more compact storage of baled hay. It has

been found that chopped hay due to its tighter packing in the mow often results in moldy or barn-burned hay. To avoid this difficulty extensive flue and blower systems have been installed to drive off excess moisture. It all adds to the cost of farm operations.

Another problem created by mechanization is the displacement of farm labor. Through no choice of the farmer he has been forced to mechanize the old farm. Even before the war there was a definite trend of labor away from the farm. Farm labor has been characterized through the years by its long hours and low wage scale. The 12-hour day has been too common on many farms. The thrill of the city has also been a factor in attracting young men away from the farm. Many of them will some day wish they were back on the farm, but when that time again arrives it will require a small fortune to become established. It is true, nevertheless, that farm work except for certain harvest periods is not as hard nor tedious as work on the industrial assembly line. There may be plenty of timeout periods in the average farm day.

Various changes in management have been adopted by farmers to meet the labor shortage. Some have simply seeded the place down and loaded it with cattle for the summer while others have rented the entire farm to pea and corn canning companies. Many have purchased the necessary machinery whereby they were enabled to operate the farm alone.

The farm population has decreased by about 3,000,000 since 1940 which represents a drop of about 12 percent. In spite of this drop in number of farm laborers, record crops have been produced for the last eight years.

All indications point to a continued displacement of farm labor and an increased use of labor-saving machines. This will continue as long as the farmer's income is at the present high level. It will probably mean the doubling up of some of the smaller adjacent areas for more efficient operation, which in turn will send a few more people to the cities. It will be difficult for these men to return to farm work, should they so desire, as the employment situation in industry grows tighter. Once the investment has been made in the machine, the farmer can ill afford to continue the services of the extra man. It is equally inefficient to retain most of the horses after changing over to the tractor.

The farm implement companies are perfecting numerous types of machines designed to remove the load from the farmer's back. At a cost of about $2,000 an automatic barn gutter cleaner may be installed which will carry the manure from the barn and onto the waiting spreader. For another $700 to $1,000 one may install a machine that will heave the silage out of the silo. We have milking machines at all prices. With a good milking machine, one man using modern techniques can milk 25 cows in less time than 3 men can do the job by hand. Instead of a large crew to thresh out the grain, 2 men with a combine, an elevator, and a couple of trucks can cut and thresh the grain in one operation without employing hand labor. Many other examples could be cited to show the displacement of hand labor by machinery on the modern farm. Quite a sizable group of former farm laborers who have tried other types of work will never go back to the backbreaking type of farming practised thirty years ago, and the coming generation on the farm is even less likely to do so.

The mechanized farm is here to stay, and forward-looking farmers are giving serious thought to the impact of machine farming on their future operations. It becomes evident from a study of the economics of the situation that complete mechanization of the small farm can only lead to increased cost of production. It might be well to borrow a leaf from the past. In the early days of Midwestern agriculture, the threshing machine, corn shredder, saw rig, and other machines were all used on a custom basis. One farmer would own the equipment and serve the entire community at a unit price. Practically all of the harvesting machinery could serve the small farms in this manner and thereby cut the machinery cost very appreciably. The machines would cover a greatly increased acreage and would last just as long. They would have a better chance of wearing out instead of rusting out. There are some objections. Under certain adverse weather conditions some farmer might suffer a loss of crop value by waiting his turn at the use of the harvesting machinery. Rotating the order of usage from year to year would distribute this chance and reduce such losses to a minimum.

Complete mechanization of the small farm as a unit in itself does not seem practical for the man who expects to earn his living from the farm. The man with the large farm can not farm without it, and the country gentleman usually insists on having all the machinery he can find.

It may well be that the small farmer of fifty years hence will sit on his front porch and operate

the little farm by merely pushing buttons. I will not be around to pass judgment on that future type of farming, but if my ghost should ease itself down beside that farmer sitting on his porch contemplating his $20,000 worth of farm machinery on a small farm, it might say: "Heck, if I had that much money, I would not even push buttons, I would just sit."

## NEWS NOTES AND COMMENTS

### CHARLES J. BRAND

Charles J. Brand, a life member and ex-president of the Agricultural History Society, died in Washington, D. C., on June 29, 1949, of coronary thrombosis. His health had been uncertain for several years.

Born in Lac Qui Parle County, Minn., on Oct. 24, 1879, Brand was graduated in 1902 from the University of Minnesota where he specialized in botany. After a year with the Field Museum in Chicago, he joined the staff of the U. S. Department of Agriculture in 1903 and remained there in various capacities until 1919. In the Department he was in charge successively of clover and alfalfa investigations, paper plant studies, and cotton handling and marketing. He was instrumental in organizing the Bureau of Markets and was its first chief, 1913–19. In this capacity he enforced presidential proclamations governing stockyards and supervised the purchase and distribution of nitrate of soda for agricultural use during World War I. He also served on several committees of the War Industries Board at this time.

Brand was vice president and manager of American Fruit Growers, Inc., during 1919–22. He then returned to the Department of Agriculture and served as a consulting specialist in marketing until 1925. He became executive secretory and treasurer of the National Fertilizer Association in 1925 and continued in this position until he retired in 1945. He was co-administrator with George N. Peek of the Agricultural Adjustment Administration during May–October 1933. He was executive director of the fertilizer code under the National Recovery Administration from 1933 to 1935. After his retirement in 1945, he maintained an office in Washington as an economic consultant on agricultural and industrial problems.

Brand was gifted with a keen mind and was an indefatigable worker and fair-minded administrator. His interest in public affairs was intense. He was a member of many scientific and business organizations and participated in numerous meetings at home and abroad. As president of the Agricultural History Society during 1945–46 and later as a member of its executive committee, he was active in promoting the welfare of the society and gave particular attention to the extension of its membership and influence.

### THE 1949 ANNUAL MEETING

The Agricultural History Society held its 1949 annual meeting in the South Building of the U. S. Department of Agriculture in Washington, D. C., on Sept. 13 at 7:30 p.m. Preceding the meeting about thirty members and guests dined together in the cafeteria of the Department.

At the business session, John D. Hicks, the president, presided. Charles A. Burmeister, the secretary-treasurer, reported that the minutes of the previous annual meeting and the financial statement for the year 1948 had been mailed to the membership. The auditing report of Robert E. Post and Walter T. Borg was then read and accepted. Everett E. Edwards, the editor, reported on the journal, the joint meetings with other organizations, and the membership trends. Carleton R. Ball presented an informal report on behalf of the museum committee.

It was urged by John D. Hicks that the society should hold several sessions devoted to papers and symposiums as part of its annual meetings, and this suggestion was referred to the executive committee. It was also suggested that the executive committee should review the membership and status of the standing committees with a view to ascertaining if they need reorganization. A memorial resolution expressing the society's loss at the death of Charles J. Brand, a life member and ex-president, and Edmund C. Burnett, a charter member and contributor to the journal, was presented by M. L. Wilson.

The chairman of the committee on the constitution and bylaws, Arthur G. Peterson, reported that the membership had approved the amendments to the bylaws changing the dues for student and life members. Wayne D. Rasmussen, chairman of the nominating committee, reported that 73 ballots had been returned and that the following were elected for the year, 1949–50: president, Paul W. Gates; vice president, Fletcher M. Green; secretary-treasurer, Charles A. Burmeister; and executive committee, Gilbert C. Fite and O. C. Stine.

Following the business session, John D. Hicks presented his presidential address entitled "The Legacy of Populism in the Western Middle West." About fifty members and guests were present.

### BRIGHT TOBACCO

In her book, *The Bright Tobacco Industry, 1860–1929* (Chapel Hill, University of North Carolina Press, 1948, 754 p., $8.00), Nannie M. Tilley presents far more history and more history that is significant in

the agricultural and industrial development of the United States than the modest title implies. The opening chapter summarizes the story of bright tobacco from the early seventeenth century when its virtues and the reasons for them were recognized to the time of the Civil War when formulas for its production were developed. In the thirteen chapters that follow every phase of the cultivation, marketing, and manufacture of this tobacco is considered in detail.

This contribution by itself is important, but the chapters have additional significance because of the historic role of bright tobacco. Its ultimate large-scale utilization led to fundamental changes in the methods of preparing the seed bed, in harvesting and curing, and in crop rotation. The complicated grading system needed for this tobacco was the main reason for the rise of the loose-leaf auction sale system of marketing. Again also it was the utilization of bright tobacco that led to the development of almost every mechanical device used in tobacco factories today. Still another way of emphasizing the significance of this study is to point out that the area devoted to bright tobacco produced about 49 percent of all the tobacco grown in the United States in 1929. In addition, since this tobacco has long dominated the economy of the region where it is grown, its history is largely the history of the life of the people of that region.

Two factors contributed to make this book an outstanding contribution to American agricultural history, namely the author's background and her prodigious research. Her youth in the Old Bright Belt gave her an understanding of the tobacco country which she has seemingly unconsciously made part of her study. The sources tracked down and utilized in her research are listed in a bibliography, which, although designated as "selected," takes eighteen pages.

The volume includes over forty pertinent illustrations. The appendices present supplementary subject matter ranging from curing formulas to firm inventories. The completeness and accuracy of the index does justice to the subject in that it makes the details readily available. These features, so frequently omitted in these days of popularization, add appreciably to this outstanding contribution to agricultural and industrial history.—*Everett E. Edwards.*

### TITANS OF THE SOIL

Edward Jerome Dies in *Titans of the Soil: Great Builders of Agriculture* (Chapel Hill, University of North Carolina Press, 1949, 213 p., $3.50) presents biographical sketches of seventeen American agricultural leaders, "each of whom, in his own way, made a priceless and enduring contribution to the advancement of our agriculture." The seventeen selected are George Washington, Thomas Jefferson, Elkanah Watson, Eli Whitney, Henry L. Ellsworth, Edmund Ruffin, John Deere, Cyrus Hall McCormick, Justin S. Morrill, Samuel W. Johnson, Wilbur O. Atwater, Seaman A. Knapp, Stephen Moulton Babcock, Theobald Smith, Mark A. Carleton, Harvey W. Wiley, and George H. Shull. The biographies are of uniform length; each is six or seven pages long. Each is accompanied by a portrait and a useful bibliography.

Through the media of these biographies, Mr. Dies describes many of the highlights of the development of American agriculture, such as the activities of the gentlemen farmers, the beginnings of mechanized farming, the application of science to agriculture, and the origins of land-grant colleges, experiment stations, and extension services. His sketches are factual and generally accurate, each one emphasizing the major contributions of a great agriculturist. There are, however, weaknesses. One wishes sometimes for greater emphasis on these contributions and less emphasis on genealogies, marriages, and personal affairs. The biography of Elkanah Watson, for instance, is devoted too much to his patriotic and business adventures and too little to his origination of the agricultural fair. The contrast between Seaman A. Knapp's Terrell Plan and the older type of demonstration farm is not made clear, and consequently the reader misses this man's unique achievement. On the other hand, the contributions of some of the men are overstated. George Washington was not "the first American to raise mules"; mules were raised in Connecticut and Massachusetts in colonial times. Jefferson should not be credited with the introduction of "the moldboard cast entirely in iron. . . ."; his contribution was limited to an improvement in its design. Others besides Justin S. Morrill were responsible for the Land-Grant College Act just as George H. Shull was only one of several creators of hybrid corn.

On the whole, however, I find the book good. It was not written for the scholar but for the reading public. Those readers will find here stories for the most part not easily available elsewhere, and they will find these stories well-written, many of them dramatic, all of them human and sympathetic.

Near the end of the book, there is a chapter which provides very short biographies of Abraham Lincoln, Horace Greeley, Luther Burbank, David Fairchild, Liberty Hyde Bailey, Cyril G. Hopkins, the Cokers, Henry Ford, and George Washington Carver, but these biographies of less than 800 words are too short to be of much value. Happily, they too are accompanied by bibliographies.—*Robert G. Dunbar.*

### TIMBER TRADE IN THE PACIFIC AREA

The material in Ivan M. Elchibegoff's *United States International Timber Trade in the Pacific Area* (Stanford, Calif., Stanford University Press, 1949, 302 p., $7.50) will probably be drawn upon widely in the years to come. The study has implications broader than trade in timber in the Pacific area, for the author has related timber to the geographic, economic, and social backgrounds of the countries involved. In a sense it is a study of the development of the Pacific countries, with an emphasis on timber.

The author's thesis is "that the lumber industry in the Northwest is a domestic industry and that exports are incidental to production for the internal market." In the future, he thinks, American forest policy and the demands of the internal market will decrease the amount of West Coast timber available for export. In the meantime the great forest reserves in Siberia may be opened for world consumption, depending upon political considerations. But if these reserves are not made available, world prices for forest products going into international trade will rise to "unreasonable heights" and lead to intensive utilization of forest resources in deficit areas and to the development of substitute materials.

From the data assembled it would appear that the timber resources of much of the Pacific area consist of tropical hardwoods and inaccessible or underdeveloped bodies of softwoods. Curiously enough, one of the problems, even in tropical countries like Siam, is underpopulation. Other more obvious difficulties are shortages of capital and technical personnel and lack of transportation. Mexico and the Philippines seem to have the most advanced forest legislation, although there is frequently a gap between legislation and practice. China's problem is a thousand years old, and its solution must begin with soil rehabilitation, rather than reforestation.

Insofar as they bear upon the author's field of study, forest resources, soil conditions, terrain, climate, agricultural products, transportation, population, politics, economics, social conditions, international trade in the twentieth century, and international organizations are all touched upon or developed. For example, special ocean carriers for timber products have never been developed because of the problem of securing a return cargo. Consequently, the Pacific has been the "happy hunting ground" of the tramp steamer, and ocean freight rates in the area have depended upon bargaining position. The author is to be congratulated upon the size of his net and the fineness of the mesh. He seems to have landed the big ones, and few minnows have slipped through.—*Rodney C. Loehr.*

# FOOD IN ENGLAND

E. PARMALEE PRENTICE

One of the most important considerations affecting the conditions of life in any land, perhaps—all things considered—the very most important, is the relation between the numbers of the population and the adequacy of the available food supply. The greatest tragedy that comes to man, Dr. James S. McLester says, is nutritional failure,[1] for it brings emotional depression, loss of efficiency, and dulling of the intellect.

In the history of our western world there have been two great diets. The first came when men began to raise grain on the river bottoms of the Tigris, the Euphrates, and the Nile. Grain is nourishing; it makes large returns for the time and effort spent in raising and harvesting it, and it can be kept without spoiling for indefinite periods. No other food has equal advantages, and so, from the beginning of our agricultural civilization dependent on hand labor, grain has been the principal element in the diet. With grain, such other foods were used as could be had—meat or fish, roots or fruits—but there was no other food to be had in such large quantities as grain, so in the end all other eatables proved to be mere relishes while grain in some form was the staff of life. This was the diet on which men lived in all the lands about the Mediterranean and in Europe from the earliest ages until some time in the first part of the nineteenth century.

*Constant Scarcity.* In the very beginning of history, however, population became larger than hand labor could supply, and so, during all the years that man has dwelt on the Continent of Europe up to the time of our great-grandfathers, there has been, among European populations and among the populations gathered about the Mediterranean Sea, a constant scarcity of food, rising frequently to famine proportions. We have no detailed information on the subject of scarcity in Europe until several centuries after the beginning of our era, but as soon as the history, with which we are familiar, begins, it, like other histories, tells the story of the struggle for food which marks all life. In Finland during a very long period there has been an average of twenty years of famine in every century,[2] while in England there have been ten famine years in a century, with the addition of a varying number of years of high prices which make the average higher.[3] This condition of constant scarcity, long prevailing in Europe before the nineteenth century, appears very clearly in contemporary writings of the different periods in France, Germany, and other countries, the accounts becoming fuller and more detailed as time goes on, and in England being very complete for the eighteenth century, during which the rapidly deteriorating food situation is shown by continuous contemporary publications.

Of course the words *dearth* and *famine* are to some extent unavoidably indefinite. There was no rule to determine how severe or how widespread a dearth should be before it could be called a famine. Undoubtedly the terms varied from time to time and place to place. There was no transportation by land on a large scale, so there might be great want in one community while in another, not far distant, conditions would be fairly easy. There was no general system of rationing so one man in a community might have adequate supplies while many were short. Scarcity, however, in some degree was everywhere. Moreover, no community, and few persons at any time, had the variety of food containing the different essential elements necessary for normal growth and health, while, on the other hand, every population that was subject to famine in occasional years was living near the edge of want in all years. This was true in England in the eighteenth as in all previous centuries and possibly, so far as concerns the interpretation of the history we read, it may be safe to assume that the usual degree of want existed when nothing was said about it. Any notable decrease of want could well have been mentioned.

The constant scarcity which had prevailed in Europe through all the time man had occupied the

[1] *Nutrition and Diet in Health and Disease* (ed. 5, Philadelphia, 1949), 653.

[2] *The Finland Year Book for 1939–40*, ed. by I. Leiviska (Helsinki), 175.

[3] William Farr, "The Influence of Scarcities and of the High Prices of Wheat on the Mortality of the People of England," Royal Statistical Society, *Journal*, 9:163 (London, 1846).

Continent was, and is, by far the most important fact in European history. It is not mentioned, however, by Lord Macaulay, nor by John Richard Green, nor by many others of our most popular historians. Possibly they thought, with Henry Thomas Buckle, that famine had been abolished and could never return,[4]—or possibly they had other reasons. Nevertheless, scarcity was always important and, after a brief happy interval in the nineteenth century, is once more the greatest of all subjects,—the key by which we understand the past of nations and civilizations and the guide by which we judge of the kind of life we see shaping for ourselves and our descendants.

*The Old Diet of Bread and Relishes.* This was not a diet chosen, like our foods of the present day, from considerations of health or pleasure. It was a diet imposed by unalterable necessity. For thousands of years men lived on grain because that was the only food which combined the three needed qualities,—nourishment, quantity, and keeping.

With the grain there were relishes—chiefly salt or fresh meat, salt or fresh fish, and cheese. When bread was the principal food at every meal and relishes were few, cheese was more important than it is today, so, fifteen or more years before Columbus crossed the ocean to discover new lands in the west, Panthaleon of Confluentia set out on a tour of Europe to discover what he could about cheese, —whence it came, what different kinds of cheese there were, and why the supply was not larger. There seems to have been some doubt at the University of Cambridge in 1783 whether the discoveries of Columbus and the opening of the western hemisphere brought as much good to the people of Europe as it brought of evil,[5] but Panthaleon had no doubt about the subject of his investigation. Cheese he knew was good, and he told what he had learned about it in his book, *Summa Lacticiniorum*, published at Torino in 1477. Whenever other relishes besides those named could be had, which would not be often, there might be rabbits, wild fowl, or poultry, and to drink with the meal there would be, in northern countries, a thin beer or ale and in southern countries, wine. Onions, garlic, and leeks were often used because, like spices, they helped to disguise unwanted flavors. Cabbages were used occasionally, but other vegetables were not used, partly because they were not liked and partly because the labor to raise them could not well be taken from other more important work. For the same reasons, fruit was not eaten because not liked and because the effort required to raise it was too great.

There is an excellent history of garden vegetables given by Bruyerinus Campegius in his book, *De Re Cibaria*, published at Lyon in 1560, from which it appears that most of the vegetables we have were known to his time and to the ancient world. Potatoes may also have been known to Bruyerinus, and by the seventeenth and eighteenth centuries all the vegetables which came from America were known in Europe—the potato, maize, Jerusalem artichoke, "French" beans and Lima beans, tomatoes, and others. Vegetables, then, were not unused because they were unknown but because they were not desired or could not economically be produced.

*Deficiencies of Old Diet: Essential Elements.* Bread and relishes, then, were the diet on which Europe lived—and starved—for many centuries before the nineteenth, and in some degree the diet was always deficient in elements which we now know are essential for normal growth and health. There was rarely, perhaps, a complete lack of any one of the most important elements, but there was never an adequate supply. Moreover, the diet was also deficient in fats and oils to an amount which neither the olive oil of Mediterranean countries, nor the butter from Holland, Normandy, and other districts, could make up.

*Deficiencies of Old Diet: Quantity.* When all the grain that could be raised was often insufficient to supply what was needed for human consumption, there was none for cattle or poultry. Grass seed was not separated until about the middle of the eighteenth century, and before the days of agricultural machinery, pastures and "artificial" meadows could not be rotated, so the only food on which cattle could be kept over winter was the straw from the grain that had been raised, reaped, and threshed by hand labor, the leaves fallen from the trees in autumn, and the "wild" hay—whatever it might be that cattle would eat and that a farmer could get in. There might also be, on occasions, a small quantity of hay from seeded meadows, but hay-making methods of those days were so slow that hay was not brought in until it had bleached nearly to the color of straw and had lost much of its nutritive value. Few animals could be kept alive on these supplies, so the cattle that could not be

[4] Henry Thomas Buckle, *History of Civilization in England* (New York, 1894), 1:155 n. 5; first published in 1857.

[5] *Annual Register*, "Chronicle," 26:210.

fed were killed in the fall and their flesh salted. There were few hands and many things to do; salt, much or little, was an expense, and—whatever the cause—the salting was not always well done and complaints were frequent that salted meat did not keep well in the spring.

When grass began to grow, the farmer would get his neighbors to help him lift to their feet the poor animals that had survived the winter and to steady them as they tottered out to the common of pasture, where they might pick up some scanty food during the summer and regain a little strength. Lifting time was well known in England until the middle of the nineteenth century.[6] It was a pitiful procession the weak animals made as they moved from the shed to the field, but the farmers themselves had been on short rations and perhaps had suffered not much less than their cattle.

*Roast Beef of Old England.* This is a phrase which came from Henry Fielding's *The Grub Street Opera* of the hungry days in 1731, and which was repeated in Isaac Bickerstaffe's play, *Love in a Village*, produced in the hungry days of 1762, but—as in England at the present time—roast beef was a pleasant subject on which to dwell because hunger always likes to think of food. In fact, however, when cattle feed was scanty, roast beef was not a familiar dish on the English table, and if it ever was seen, was most likely made from "casualty" beef, from old cows or old oxen whose days of usefulness had passed, or from "black" cattle which had fed on scanty pastures.

*The Old Diet: Eels as a Relish.* In places near the sea or near rivers there is commonly a good supply of fish, but since ordinary fish do not keep long after being taken from the water, much of the fish used was necessarily preserved by salting. Apparently eels can be kept alive for some time after capture and can therefore be eaten fresh when other fish is not eatable. Eels were therefore long a popular food. Philip Falle, in his *Account of the Island of Jersey*, in 1734, said that the sea about the Channel Islands might have been called the Kingdom of Conger Eels, so great was the quantity of eels taken there and brought to market.

We are told that epicures of former days very highly regarded the flavor of eels, particularly of lampreys, but when the art was learned of keeping fish in fresh condition long enough to serve, the eels lost their special value.

[6] Herbert Dawson, "Early English Dairying," *Hoard's Dairyman*, 86:387 (June 10, 1941).

*Old Diet and "Obstructions."* When bread was the principal food and all else were relishes only, the quantity of breat eaten was considerable. Bruyerinus said that among people of means and connected with the Court at Paris there was given to each person at the table one twelve-ounce loaf of the best bread at noon, and the same amount at night.[7] The physical effects upon the condition of any person living on such a diet can well be imagined. Shakespeare referred to the man who "Gets him to rest, cramm'd with distressful bread."[8] Nonnius said that every repletion is bad but the worst is to eat too much bread,[9] and Bonamicus said that a hearty meal of bread "clogs the system," if that be the meaning of the phrase "implet admodum vasa."[10] As to all this Dr. Samuel Johnson said that "from obstructions proceed most of those pains which wear us away slowly with periodical tortures, and which, though they sometimes suffer life to be long, condemn it to be useless, chain us down to the couch of misery, and mock us with the hope of death."[11] A little later Dr. Johnson referred to the same subject again when he spoke of "the miseries which urge impatience to call on death."[12]

It seems, indeed, that during many centuries and without success, men had tried by herbs, mineral waters, and medicines to correct the troubles coming from the only diet available to them—an effort of which John Dryden and Lord Byron had something to say,[13] and so it was that old age was premature, decay of the physical frame came early, and life was short.

*Premature Old Age.* So much attention has always been paid to feminine charms that we can get from the books a better description of the effects of advancing years in the case of women than of men.

Thomas Parnell's *Elegy to an Old Beauty*, whom he advised to "Haunt less the plays, and more the public prayers," was addressed early in the eighteenth century to a lady fifty-six years old. Susan Edmonstone Ferrier in her novel, *Destiny*, pub-

[7] *De Re Cibaria* (Lug. 1560), book 6, ch. 6, p. 394–395.

[8] *King Henry V*, act 4, scene 1.

[9] *Diaeteticon* (Antverpiae, 1627), 185; E. Parmalee Prentice, *Hunger and History* (New York, 1939), 106.

[10] *De Alimento* (Florentiae, 1683), 380.

[11] *The Rambler*, No. 85, Jan. 8, 1751.

[12] *Ibid.*, No. 178, Nov. 30, 1751.

[13] Isaac Disraeli, *Curiosities of Literature* (London, 1858), 2:464–465.

lished in 1831, but written apparently about 1827, described as an old scarecrow, "haggard, growing deaf and blind,"[14] a woman who could hardly have been much, if at all, over forty years old, and whose husband was considered well along in years when he died at an age not far from fifty.

Mrs. Gore in her novel, *Mothers and Daughters*, after describing the beauty of Claudia and Eleanora Willingham when they entered the social life of London at eighteen and twenty, spoke of them four years later as "fading into the sere and yellow leaf of tarnished youth."[15] At twenty-five a young lady is a "super-annuated kitten."[16] When young people began in their early twenties to show the effects which come with advancing years, the processes of decay must have begun before they were out of their teens. Of men and women alike, Mrs. Gore said: "Were any human being enabled by some magic change to contemplate his or her own person after an insensible interlapse of ten years, the effect would appear incredibly awful."[17]

This would not be true as a general rule in the twentieth century for there are many men who at fifty might be taken for forty, and men of sixty-five or seventy who might be taken for fifty-five. Indeed, at the present time there is a long period during what we call middle life—from thirty-five to seventy—when we seem to age very slowly. In times when the human frame grew old so quickly, the period which we call the prime of life must have been very short. It has many times been remarked that the armor worn by famous knights of several centuries ago is often too small for men of the present day, and we wonder what the age of the men was, to whom the armor belonged, when their bodily growth began to slacken, and whether the stunting effect upon their minds began at about the same time—or possibly earlier. Francis Bacon thought the knowledge of men of his time childish and immature,—as though mental growth had paused with the growth of the body. What they knew, he said, was mostly derived from the ancient Greeks, of whom H. A. Taine, in his *History of English Literature*, remarked:

> . . . the tree of knowledge must be estimated only by its fruits. If we wish to judge of a philosophy, we must observe its effects; its works are not its books, but its acts. The philosophy of the ancients produced fine writings, sublime phrases, infinite disputes, hollow dreams, systems displaced by systems, and left the world as ignorant, as unhappy, and as wicked as it found it.[18]

*Food Without Progress: Stagnation.* The old diet then was used in Europe for over two thousand years, and there is general agreement that knowledge made very little advance in all that time. Dr. Austin Freeman said that "from the dawn of history to the latter half of the eighteenth century, nothing occurred substantially to alter the relation of man to his environment."[19]

"The modern development of knowledge . . . ," Professor Edward M. East of Harvard University said, "which has placed this era so far ahead of previous eras, is the result of an acceleration so recent that it may be dated within the memory of our great-grandfathers some hundred and fifty years ago."[20]

Other writers have spoken in the same way and there is no doubt that the entire period during which the old diet was used was a long period of stagnation.

*Food Rationing.* What is the influence of such a period of undernourishment on the generations which suffer it and on subsequent times? The subject attracted the interest of Georges Duhamel, a distinguished member of the French Academy, who had just returned from a visit to England and who, in a contribution to the Paris *Figaro* of August 12, 1949—hereinafter discussed—compared conditions in the two countries.

The situation in England was that trade had fallen off, British income was low, and to save the expense of buying abroad, food had been rationed at home. When he crossed the Channel, Duhamel found food abundant. All that was refused in England was liberally supplied in France, so he ate and drank as he pleased and reflected a little as he traveled through the cultivated fields of his own country.

This abundance, which at first impressed him so much, was indeed pleasant after his experience abroad, but even French abundance was not for everybody. France was like England in that French

[14] Susan Edmonstone Ferrier, *Destiny* (Boston, 1893), 2:198, 202, 266.

[15] Catherine Grace Frances (Moody) Gore, *Mothers and Daughters*, vol. 2, ch. 11.

[16] *Ibid.*, 1:2–3.

[17] *Ibid.*, vol. 2, ch. 9.

[18] H. A. Taine, *History of English Literature*, tr. from the French by H. Van Laun (Philadelphia, 1908), 4:230.

[19] Austin Freeman, *Social Decay and Regeneration* (London, 1921), 80.

[20] Edward M. East, *Mankind at the Crossroads* (New York, 1923), 18.

trade, too, had fallen off and France lacked buyers. Show windows in France are filled with goods but sales are few and those persons who would like to buy have little money.

Loss of trade, then, is the root of the problem in both countries, but Duhamel says nothing on this subject. His interest was in the effect of rationing on the people of England. What the English people have been, we know. What will they be in the future?

The productivity of French agriculture greatly exceeds the productivity of agriculture in Great Britain, partly because the area of France is considerably more than double the area of Britain and also because—as the long history of British prominence in sheep raising indicates—there is much land in Great Britain which, on account of its rough character, its dryness, or for other reasons, is not very good for farming. France, therefore, comes nearer to feeding her population than does Britain, which, as Edmund Burke said long ago, has only her commerce upon which to rely. It seems, then, that if the British population is to continue at, or near, its present figure, Great Britain ultimately will be compelled again to sell its goods and services on a competitive basis, as in the great days of its trade, it used to sell in the markets of the world.

*The Beginnings of Progress.* There is a very suggestive remark made by Dean Jonathan Swift in his satire, *The Tale of a Tub*, in which he referred to "the late refinements of knowledge running parallel with those of dyet in our nation." This was written in 1696, and the "refinements" to which the Dean referred were doubtless the Norfolk tillage, including clover in the rotation and the market gardens which at that time were "creeping slowly into Kent." The year when the *Tale* was published was a year of famine in England, but, rightly or wrongly, there was no rationing, enclosures were going forward, Robert Bakewell began farming in 1745, and soon afterward grass seeds were separated and fields of clover planted. There seems to have been at this time a noteworthy spirit of mechanical invention, for in the latter part of the century, stationary steam engines were invented and British commerce started on its path toward the position in world commerce which later made Great Britain the leading commercial people and the richest nation in the world. No market could hold out against the low prices and high quality of the British goods.

*The New Diet and Progress.* There had been a very long period in which the ways of living in Europe changed little. "It is difficult for us today to imagine," George Macaulay Trevelyan said, "how slow was the pace of change before the era of inventions."[21] And then came the nineteenth century and the new world which it brought! It was a very wonderful change and a very rapid one—the greatest and the quickest change in the ways and powers of man that ever came to the human race. What was the cause of it all? Just this—that in place of the old diet which did not permit a normal growth, men were given the new varied diet which contained all needed elements.

*Progress: The Lengthening of the Prime of Life.* It was the new nineteenth century varied diet which first enabled men to develop all their faculties. The human expectation of life was doubled and the lengthening did not come by prolonging the period of age. It came when men no longer suffered decrepitude early in life before reaching their prime. Instead of decay, their growth, physical and intellectual, was promoted and the prime of life, rarely attained on the inadequate nourishment of previous centuries, was now lengthened, so that it is no longer weakened by premature old age and often continues in full vigor to the very end of a long life.

*Will Progress Continue?* The history which has been given raises a problem of vast importance to all our western world, for if progress did not come until man received adequate nourishment, so it may not continue if our present supplies shall run short.

This was well stated by Georges Duhamel in his contribution to the Paris *Figaro*:

> Anyone who has traveled much knows that peoples who have suffered long from food shortage or who have been insufficiently nourished, reach a point in no long time when they cease to produce men of genius. To create and maintain high civilizations requires the support of many groups of men of high talent such as can be supplied only from the whole body of the population. If food is deficient there is danger that the sources from which talent flows may become dry. To maintain its fertility the human mind must have some elements of nourishment that cannot be taken as pills.

Bread is not rationed in England, but many of the foods eaten with bread are either rationed, or expensive to buy, or are difficult to procure, so that there is a tendency among English people to

[21] George Macaulay Trevelyan, *English Social History* (London, 1942), 56.

return toward a diet not very unlike the old diet of bread and relishes. Moreover, rationing in England is severe, and the effects of continued undernourishment may be expected soon to show in the offspring of undernourished parents. Meadows and pastures on the Shetland Islands produce scanty crops, and the small Shetland horses, so well known, grow no larger because their physical inheritance comes from ancestors which could grow and live on supplies of food which would not support larger animals.

The national character which we associate with different peoples is derived partly from inheritance and partly from the training which the young receive from parents and teachers. It required over a hundred and fifty years to develop by inheritance and training the men of the nineteenth century—scientists, business managers, and workers of all kinds—from the men who lived at the time of the small beginnings in the refinements of knowledge which Dean Swift mentioned.

The future of our western world, therefore, depends upon the relation between numbers of the population and the adequacy of the available food supply—while so far as peace is concerned, we will probably find—as the history of the comparatively peaceful nineteenth century shows—that it depends more upon the conditions in which men live than upon armament.

If populations cease to increase and all classes of our various peoples show the high efficiency which marked the rise of progress, we have every reason to hope for a happy and peaceful future.

## THE RURAL ELECTRIFICATION ADMINISTRATION IN PERSPECTIVE

H. S. PERSON

*Consultant in Business Economics and Management, New York City; and Consulting Economist, Rural Electrification Administration*

Rural electrification as a program of the Congress was established by President Franklin D. Roosevelt in Executive Order No. 7037 signed on May 11, 1935, under authority of the Emergency Relief Appropriation Act of 1935,[1] which had been approved on April 8 of that year. This executive order created a Rural Electrification Administration with powers in an Administrator to "initiate, formulate, administer, and supervise a program of approved projects with respect to the generation, transmission, and distribution of electric energy in rural areas." The authorizing act had made $100,000,000 available to the President for allocation to rural electrification activities.

It should be emphasized that REA was established under conditions that made it one element in a general program of relief of unemployment. This was a controlling factor in its initial activities. Not until the Rural Electrification Act of 1936, approved May 20, 1936,[2] was REA given status as an agency whose primary purpose was promotion of rural electrification. As then provided it was to execute a 10-year program of promotion by making interest-bearing loans, repayable in not more than 25 years, to local interests so organized as to make them eligible borrowers of public funds, preference to be given to public bodies and to cooperative, nonprofit, and limited-dividend associations organized under State laws.

During the preceding quarter century there had developed from small beginnings a movement concerned with electrification as a public interest that called for more attention and action than mere regulation of commercial electric corporations. This movement early acquired a vigorous rural electrification content. Great names—Gifford Pinchot, George W. Norris, Franklin D. Roosevelt, and others—were involved in a persistent educational campaign concerning conditions, adequacy, and costs of electric service.[3] To some of those who had devoted years to this campaign, at times in the

[1] 49 Stat. 115.

[2] 49 Stat. 763, 7 U. S. Code, ch. 31.

[3] This pre-REA movement is concisely described by a participant observer, Morris Llewellyn Cooke, in "The Early Days of the Rural Electrification Idea: 1914–1936," *American Political Science Review*, 42:431–447 (June 1948). The article mentions, in addition to leaders like Pinchot, Norris, and Roosevelt, a score of others whose contributions are less well known but omits reference to Cooke's own contributions. Briefly listed, they are: Director of Public Works, Philadelphia, who inspired the Philadelphia Electric case (1914–16);

face of apparently insuperable difficulties, Executive Order No. 7037 may have appeared to be the final answer to their efforts. However, it was discovered soon after the establishment of REA that prevailing conditions required months of patient effort before a way could be cleared for transforming legal authority and available funds into loan contracts and the design, construction, and operation of rural electric distribution systems.

*A Relief Agency Searching for a Way.* As participant in a program of relief from unemployment the immediate task of REA was to promote rural electrification in such manner as to get funds rapidly into channels of commerce and thereby stimulate employment both in the construction of new electric lines and in the production by suppliers of poles, conductor, transformers, and other essential materials.

The day after Executive Order No. 7037 was signed, the Administrator, a man of vigorous and direct action, opened an office in a suite of rooms loaned by courtesy of Secretary Harold L. Ickes in the basement of the old Interior Building. His first responsibility was to assemble a nucleus staff of engineers, attorneys, accountants, and other professional people. This was speedily achieved because preliminary steps had been taken before the signing of the order. Within a week a small staff had been assembled, more permanent quarters leased, and shortly after the middle of May REA moved to the building at 2000 Massachusetts Avenue, at one time occupied as a residence by James G. Blaine. Here the staff concentrated on its problem and discovered that "how to get started" was really a problem.

A broad pattern of applying relief funds had already been established by such agencies as the Emergency Conservation Work (1933), the Federal Emergency Administration of Public Works (1933), and the Works Progress Administration (1935). This pattern emphasized grants, grants-in-aid, and other forms of subsidy; but also included loans. There had been a general assumption that REA would proceed essentially along the same lines.

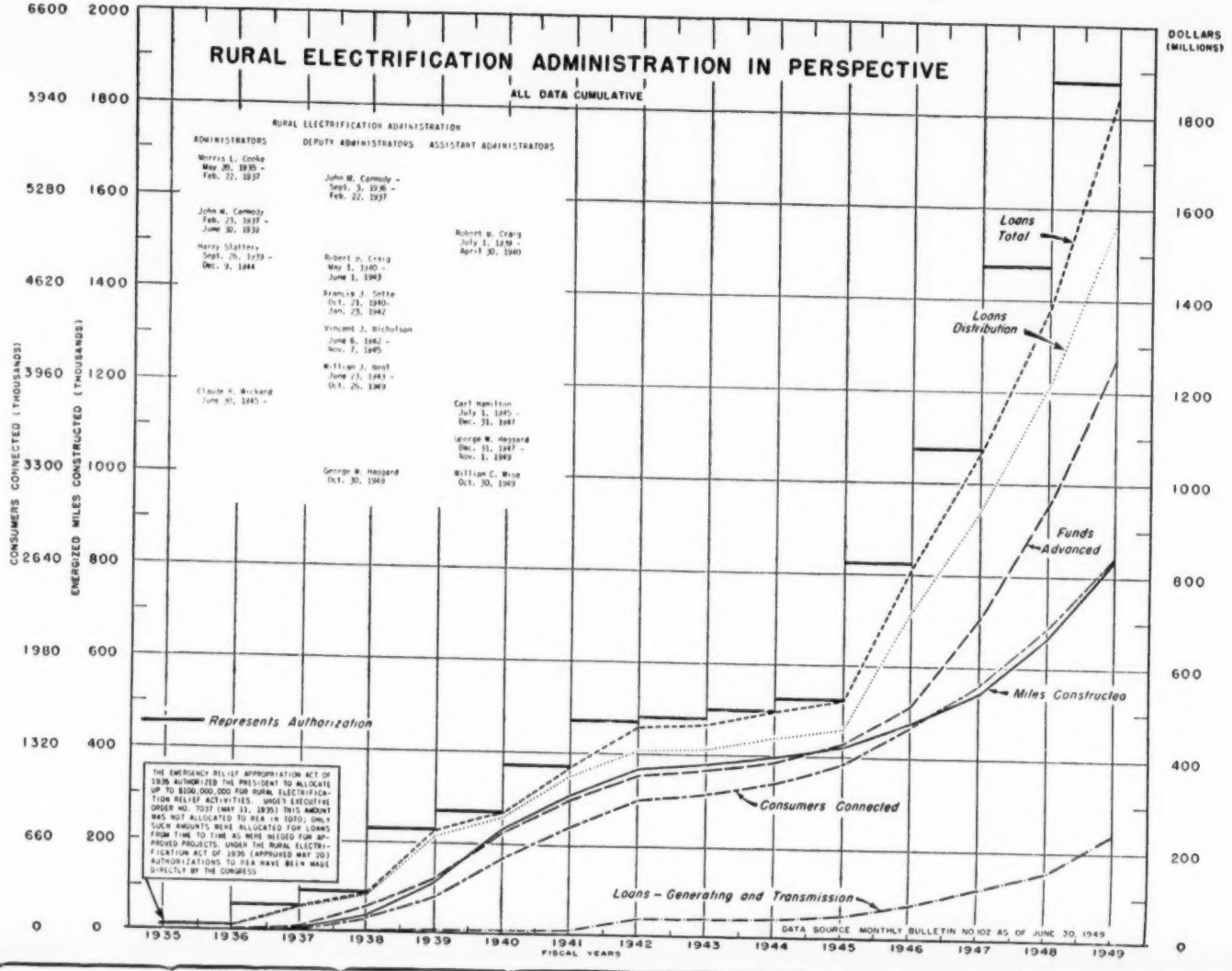
Shortly after the establishment of REA the President issued three executive orders, identified respectively as Regulation No. 1, Regulation No. 2, and Regulation No. 3.[4] These regulations purported to establish more uniform conditions of applying relief funds and to bring all such activities under more central direction. Among the various items covered in these regulations were several of especial significance to REA. At least 25 percent of funds should be spent directly for labor; 90 percent of labor should be procured from relief rolls; labor so procured should be on certification of the United States Employment Service; all exceptions to the regulations must be in each instance with the approval of the Works Progress Administration. Moreover, the President's message recommending relief legislation had expressed, among others, the principle that relief employment should not compete with private employment.

The REA staff could not discover satisfactory ways of employing grants or grants-in-aid in connection with REA projects, or of building electric systems under many of the conditions specified in the regulations issued by the President. Construction of electric lines calls for various kinds of skilled labor. Such skilled labor was not likely to be found on relief rolls in those areas where rural electrification construction was probable, and still less was skilled labor likely to go through the motions of getting on relief rolls as a step toward certification for work on REA projects.

For several weeks conferences were held with experienced executives among older relief agencies; with Secretary Ickes, then also Director of Public Works; Harry Hopkins, Works Progress Administrator, and in general direction of relief activities; and with the President. In the course of such conferences the question of REA proceeding as a lending agency came to the fore. However, a then recent ruling of the Comptroller General, relating to subsistence homesteads, occasioned doubts in respect of the legal power of REA to make loans, as distinguished from grants or other forms of sub-

director of Governor Pinchot's Giant Power Survey (1923–27), nearly one-third of which was concerned with rural electrification; vigorous proponent of the TVA Act of 1933; out-State member of Governor Roosevelt's Power Authority of the State of New York (1932–34); Chairman of the Mississippi Valley Committee (1933–34), which indicated the need of a rural electrification program; one of the group close to President Roosevelt and Senator Norris that perceived in the Emergency Relief Appropriation Act of 1935 opportunity for the beginning of a program of rural electrification under Federal auspices. It was in the logic of events that he should be appointed the first Administrator of REA.

[4] Executive Order No. 7046, dated May 20, 1935; Executive Order No. 7060, dated June 5, 1935; and Executive Order No. 7083, dated June 24, 1935.


RURAL ELECTRIFICATION ADMINISTRATION IN PERSPECTIVE
ALL DATA CUMULATIVE
RURAL ELECTRIFICATION ADMINISTRATION
ADMINISTRATORS
DEPUTY ADMINISTRATORS
ASSISTANT ADMINISTRATORS
Morris L. Cooke May 20, 1935 - Feb. 22, 1937
John M. Carmody Feb. 23, 1937 - June 30, 1938
Harry Slattery Sept. 26, 1939 - Dec. 9, 1944
Claude R. Wickard June 30, 1945 -
John M. Carmody Sept. 3, 1936 - Feb. 22, 1937
Robert B. Craig May 1, 1940 - June 1, 1943
Francis J. Sette Oct. 28, 1940 - Jan. 23, 1942
Vincent J. Nicholson June 6, 1942 - Nov. 7, 1945
William J. Neal June 23, 1943 - Oct. 26, 1943
George W. Haggard Oct. 30, 1943
Robert B. Craig July 1, 1939 - April 30, 1940
Carl Hamilton July 1, 1945 - Dec. 31, 1947
George W. Haggard Dec. 31, 1947 - Nov. 1, 1949
William C. Wise Oct. 30, 1949
CONSUMERS CONNECTED (THOUSANDS)
ENERGIZED MILES CONSTRUCTED (THOUSANDS)
DOLLARS (MILLIONS)
Represents Authorization
Loans Total
Loans Distribution
Funds Advanced
Miles Constructed
Consumers Connected
Loans - Generating and Transmission
THE EMERGENCY RELIEF APPROPRIATION ACT OF 1935 AUTHORIZED THE PRESIDENT TO ALLOCATE UP TO $100,000,000 FOR RURAL ELECTRIFICATION RELIEF ACTIVITIES. UNDER EXECUTIVE ORDER NO. 7037 (MAY 11, 1935) THIS AMOUNT WAS NOT ALLOCATED TO REA IN TOTO; ONLY SUCH AMOUNTS WERE ALLOCATED FOR LOANS FROM TIME TO TIME AS WERE NEEDED FOR APPROVED PROJECTS. UNDER THE RURAL ELECTRIFICATION ACT OF 1936 (APPROVED MAY 20) AUTHORIZATIONS TO REA HAVE BEEN MADE DIRECTLY BY THE CONGRESS
DATA SOURCE MONTHLY BULLETIN NO.102 AS OF JUNE 30, 1949
FISCAL YEARS
1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949
6600 5940 5280 4620 3960 3300 2640 1980 1320 660 0
2000 1800 1600 1400 1200 1000 800 600 400 200 0

sidy. It was decided to ask for an opinion of the Comptroller General's Office on this point. Accordingly, an able brief was submitted by the General Counsel of REA, and an informal conference on August 6, 1935 with representatives of the Comptroller General yielded approval of the critical points of the brief and cleared the way for REA to proceed as a loan agency.

The next day, August 7, the President issued Regulation No. 4,[5] pertaining exclusively to REA. This regulation set the permanent pattern—that of a lending agency; freed REA specifically from many of the requirements in the preceding regulations; and, although it reimposed some of them, gave REA authority to make its own exceptions.

This was the first and probably the most far-reaching fundamental policy decision in the history of REA. It established promotion of rural electrification as an orderly lending program on an interest-bearing, self-liquidating basis. It made rural electrification a national business investment. It made possible the subsequent great achievement of REA. Within less than 15 years a thousand borrowers—local independent business-managed enterprises—had directly or indirectly increased the number of farms electrified from 10.9 percent to approximately 78 percent of all farms. Looking back, it is difficult to see how any achievement of this magnitude and quality could have been effected by way of grants or other forms of subsidy.

The policy of promoting rural electrification by loans to eligible borrowers having been determined, REA attention promptly focused on the related problem of types of borrowers. In principle any applicant technically competent to construct and operate a rural electric distribution system and legally competent to make a valid loan contract with the Government could become a borrower. But the problem was not as simple as appears in this statement of principle. Although before lending policy was determined inquiries had poured in from 46 States, nearly all of these were simple inquiries from individual farmers or local groups of farm people stating that they wanted electricity desperately and had waited years for it, and asking what steps should be taken to get it. The response to such inquiries was that the interested groups would have to organize under State laws local corporations for the purpose of engaging in the electric utility business. Other inquiries were from State rural electrification authorities, rural power districts, existing electric cooperatives, municipal plants, and a few small commercial electric companies. For the time being REA attention was given to this latter type of inquiries, because REA responsibility as an agency for relief from unemployment weighed heavily, and these inquirers were in a position promptly to undertake new construction and add to employment.

Such inquiries were not sufficient in number to have a substantial effect on the unemployment situation. Rapid and effective relief necessarily assumed the existence of a large number of willing and eligible borrowers with sources of supply, facilities, and skeleton crews ready for immediate construction activity. The only such potential borrowers were the large commercial electric companies. To these REA then gave principal attention. It was hoped that, notwithstanding their opposition to the creation of REA, the commercial companies would be moved by a sense of public duty to cooperate in meeting a critical national emergency, and that for some of them this motivation would be strengthened by the low interest rate of 3 percent and other generous loan terms offered by REA.

Before Executive Order No. 7037 was issued, there had been informal conferences with representatives of commercial companies, because it had been foreseen that their cooperation was essential if REA were to serve effectively as a relief agency. Nine days after its issue a formal conference was held at the Lafayette Hotel in Washington, at which 15 of the largest commercial companies were represented by major executives. This meeting was one of surface good will but without commitments. At the suggestion of the Administrator of REA the utility executives present appointed a special committee of the industry to make a survey of "the approximate extent to which further development of rural electrification may be effected promptly in cooperation with the Rural Electrification Administration." The subcommittee reported in a 14-page letter to the Administrator under date of July 24, 1935.

This report expressed the judgment that in the light of earlier extensive research work "there are very few farms requiring electricity for major farm operations that are not now served," and that "additional rural customers must largely be those who use electricity for household purposes." The further judgment was expressed that the problem

[5] Executive Order No. 7130, dated Aug. 7, 1935.

of the farmer is "a social rather than an economic problem"; and that it is "not one of rates, but of financing the wiring and purchase of appliances." With such premises the report suggested a cooperating program for 1935–1936. The operating companies would spend $113,685,000 ($100,000,000 of which would be the fund made available for rural electrification by the Emergency Relief Appropriation Act) for the construction of 78,180 miles of new lines and the connection of 351,000 consumers. REA and other Federal agencies, it was proposed, were to provide $124,564,000 credit to customers for house wiring, service extensions to be paid for by customers, and electrical appliances.

The proposals in this report, the assumption that rural electrification should be exclusively a commercial company affair, the lack of appreciation of the significance of rates and other costs to progress in rural electrification, and especially the lack of vision as to what could be accomplished by a vigorous and consistent program of rural electrification looking toward "area coverage," were not met by enthusiastic response on the part of REA. In a letter of July 31 the Administrator made a courteous reply, took issue on the matter of the significance of rates and costs, stated that he would refer the matter of credit for appliances to the proper agency (meaning the Electric Home and Farm Authority then in process of re-establishment with national scope), and advised the commercial companies that "we are now organized and authorized to receive requests for loans for rural line construction from public and private agencies. May we invite your further good offices in advising those sections of the industry with which you are in touch that our routines have been established and the maximum of activity is now our desire?" Informal relations with the industry continued, but they gradually diminished, and what it had been hoped would be cooperation of the commercial companies became transformed to strong opposition to REA activities that has continued to the present time. There was at the time a consensus of many that the commercial utilities had decided on advice of counsel that it would not be expedient to enter into cooperating relations with REA at the same time that legal conflicts with the Government were developing on other fronts.

Before the prospect of relations with commercial utilities cooperating in relief from unemployment had begun to dim, REA was pushing other contacts with a view to discovering alternative potential borrowers. In May 1935 the Administrator had a conference with representatives of municipal electric plants; and throughout the summer with representatives of farmer cooperatives and consumer nonprofit organizations, the American Farm Bureau Federation, the Grange, the National Association of Master Plumbers, and other agencies having an interest directly or indirectly in rural electrification. The objective seems to have been to stimulate transformation of desire for electricity in rural areas into active demand in the form of requests for loans. The desire was widespread and intense, but the development of active demand was slow in maturing. Most municipal plants, for instance, faced legal obstacles or local objection to extensions into surrounding rural areas. The farm people did not know how to go about the setting up of a local electric distribution corporation, eligible as a borrower. Applications for loans, as distinguished from inquiries, came in slowly and in considerable variety.

The first allocation for projects from relief funds—$2,351,355—was made on September 9, 1935. One was to a State rural electrification authority, two to rural power districts, five to county electric cooperatives of which two operated under State-wide cooperatives, one to a municipal plant, and one to a private corporation which was in effect a cooperative. These borrowers were scattered among half a dozen States throughout the Middle West and the Southwest.

Circumstances were conspiring to compel the Administrator later to report that "Before December [1935], however, it became apparent that the industry was not going to use even a substantial portion of the funds available for rural electrification, and farm organizations of a cooperative character forged to the front as the principal borrowers under the REA program."[6]

*A Positive Program.* The President, Senator Norris, the Administrator of REA, and others who for the preceding quarter century had been arguing the need and practicability of more extensive rural electrification, were by the end of 1935 highly dissatisfied with the results achieved by REA as a relief agency. Their interest rapidly turned toward a more direct program. Under date of October 24 a letter from Senator Norris to the Administrator asked for information as to "what would be involved in the proper extension of rural lines, so that a much larger percentge of rural homes may be electrified, and how soon this can be brought about." The Senator's letter opened with the

[6] U. S. Rural Electrification Administration, *First Annual Report, 1936*, rendered January 1937.

statement that it is "increasingly obvious that the time is at hand when, as a Nation, we should adopt a more positive program for electrifying the largest possible number of farms." On November 14 the Administrator replied and among other things said: "The experience of Rural Electrification Administration indicates that this limitation on the extension of electric service in rural areas has been due to prohibitive costs of line construction, to excessive demands for cash contributions from farmers to pay for the lines which would serve them, to high rates which discourage the abundant use of current, and to the traditional policy of the private utilities of extending their monopolistic franchises as widely as possible, while extending their actual service only to those areas which are most profitable." He went on to recommend a positive program of "planning for construction on an area basis so as to effect the economies of mass construction." "Only by planning a fairly complete coverage of an area without leaving too many gaps and unserved patches," he said, "can the essential economies be realized."

Publication of these letters served as an opening gun in a renewed campaign. Thinking and action along this line developed rapidly. The National Grange got back of the movement by resolutions at its Sacramento annual convention in November, and the Farm Bureau at its annual convention a month later in Chicago. At the same time rural newspapers developed strong support for the movement. An appropriate bill was introduced in the Senate by Senator Norris and in the House by Congressman Rayburn. Hearings were held during the early months of 1936, and opposition, not from farm people and farm organizations but from other interests, was vigorous and persistent. Especially strenuous in opposition were the commercial utility interests which, at the time they had been in conferences that they hoped meant the use by them of rural electrification relief funds, had said: "We believe the Rural Electrification Administration can provide new ways and means for performing an outstanding job of rural electrification. . . ." The closeness of the struggle is indicated by the fact that the bill was reported out of committee by a margin of only one vote. However, the Norris-Rayburn bill was eventually passed and became the Rural Electrification Act of 1936.[7]

By this act the Congress established a positive 10-year program of promotion of rural electrification by re-establishing REA as an agency for lending funds for construction of rural electric systems "to persons, corporations, States, Territories, and subdivisions and agencies thereof, municipalities, people's utility districts and cooperative, nonprofit, or limited dividend associations organized under the laws of any State or Territory of the United States . . . at a rate of interest equal to the average rate of interest payable by the United States of America on its obligations, having a maturity of 10 or more years after the dates thereof, issued during the last preceding fiscal year in which any such obligations were issued." Additional specific wording as well as the emphasis in this wording indicates that the assumption had come to prevail that only through local organizations of nonprofit or cooperative character would widespread rural electrification ever become a reality.

Parenthetically, appropriate credit must be given to the part that came to be played by the commercial utilities. The Rural Electrification Act of 1936 proved to be for them a shock that stimulated them to independent activity in an attempt to get the highest-profit-yielding rural areas while the getting was still possible. They abandoned many of the onerous requirements noted in the Administrator's letter to Senator Norris, made a drive for "cream" areas, drove "spite lines" through the heart of proposed cooperative areas in an effort to make cooperatives' plans impracticable, and, discreditable as was much of the motivation, actually played a part, although on a selective and not area coverage basis, substantially greater in volume than that of REA in the latter's early years of electrification of American farms and rural dwellings.

*Rural Electric Distribution Cooperatives.* During the first year, when REA's principal effort was to meet its responsibilities as a relief agency and immediate results were the principal concern, serious attention was not given to local nonprofit corporations, or cooperatives, as instruments of rural electrification. However, their potentialities were not out of mind. REA kept in touch with the Federal Emergency Relief Administration which was making a study of cooperatives generally, studied memoranda prepared by the agency, and in 1936 appointed an unofficial observer to accompany a FERA mission to Europe for study of cooperatives. There were several reasons why cooperatives were not considered more seriously

[7] Approved May 20, 1936. 49 Stat. 763, 7 U. S. Code, ch. 31.

by REA when relief objectives were paramount. Rural electric cooperatives as independent enterprises take time to organize and get started, and could not be immediately effective while relief was urgent. The records of the few such cooperatives that had existed in the United States presented not better than a fifty-fifty picture of success. Study of the more successful electric cooperatives in Europe disclosed relations with controlling government agencies somewhat foreign to concepts of similar relations in the United States. Finally, a very influential reason was that at conferences with leaders of the cooperative movement in the United States, chiefly marketing cooperatives, some of these leaders not only advised the Administrator of REA, but pled with him, not to employ the cooperative form of enterprise for promotion of rural electrification. They appear to have been at that time afraid that government participation might prejudice the cooperative movement. To their credit it should be noted that this attitude has been reversed, and at recent meetings of the Cooperative League there has been high praise of the REA pattern and recommendations that it be extended to other fields of government stimulation of private endeavor.

However, prior to passage of the Rural Electrification Act of 1936, the die had been cast by default of the commercial electric companies. The Congress and REA were forced to turn to cooperatives as the principal instrument for rural electrification. Thus a second fundamental policy was established.

Promotion of rural electrification through loans to local groups of farm people organized as nonprofit corporations under State laws was more easily conceived than executed. Although American farmers had had considerable experience with marketing cooperatives, in which most of the initial capital is their own and from local banks, and is invested in goods of relatively rapid turnover, they had had no experience with cooperatives, all of whose capital would be borrowed from the Government and invested in fixed plant of a technical nature requiring a high degree of professional skill for construction and successful operation, and in a field conditioned by the variety of legislation and commission relations existing in 48 States.

The flood of communications that had been flowing in from individual farmers, neighborhood groups, and a few groups already familiar with cooperative organization and technique, indicated that the authors generally were without realization of what organizing, constructing, and operating an electric distribution system involves, and what arrangements are required to become an eligible borrower from the Government. As the Administrator said in a radio address under the auspices of the National Grange: "Much as the farmers have wanted electricity—and they have wanted it: they have seized it wherever it has been made available at reasonable terms—they have not seen the way clear to overcome the obstacle presented by the necessity of an organization for financing, promotion, construction and operation. One doesn't go into a retail store and buy a package of electricity over the counter."

Two principal problems confronting a group of farm people desiring to become eligible for a loan for the construction of a local electric distribution system were: first, proper incorporation and organization under State laws; and second, demonstration that their project could operate successfully and repay the loan within the required period, at that time set administratively at 20 years.

These two major problems involved many component problems: retaining of legal counsel and direction in incorporation and organization; election of directors and officers in a manner prescribed by law; passage of resolutions by directors in a manner specifically prescribed by bylaws; enlisting the interest and signing up of prospective members; design of the system by competent engineers; arrangements for a source of wholesale power at a reasonable rate; calculation of revenues, costs of construction and operation, and retirement of debt; and where after initial calculations payout feasibility is not evident, the procuring of additional members, redesign of the system, and finally development of a relationship among revenues, costs and amortization of debt that indicates feasibility. And as though these problems are not sufficient for a smothering of spontaneity and enthusiasm, the discovery of inadequacy of enabling laws, and attempts at blocking by commercial utility opponents through spite lines, cream-skimming construction, litigation, and opposition before commissions and legislatures. In the early stages of REA the majority of applications received were not in proper form to warrant loans, and it took several years for REA to discover and organize know-how, both to guide its own activities and to pass along to prospective borrowers to guide them in their activities.

At the beginning REA was hesitant about guidance and assistance to borrowers and did not move in that direction until compelled by circumstances.

REA at first assumed that it should not directly sponsor cooperatives. One reason was that it believed that as a lending agency it could not properly call proposed borrowers into existence if it wished to reserve discretion to refuse loans when necessary. Another reason was the assumption, from the point of view of the history of the cooperative movement, that healthy cooperatives cannot be called into existence by external promotion. The experience during 1936 and 1937, however, demonstrated that widespread desire for electricity throughout rural areas was not able without guidance to transform itself into the form of cooperatives properly organized to become eligible borrowers from the Government and with projects suitably worked out for consideration by REA. Only $59,000,000 had been loaned by June 30, 1937—and only a fraction of this to newly organized cooperatives—although loan funds to the amount of $150,000,000 had been made available by the Congress.

*Acquiring Know-How and Momentum.* These circumstances led by 1938 to a third and a fourth fundamental decision of policy. One was the decision to assume the function of local guidance to borrowers and to add to the REA organization personnel competent to go into the field, in response to inquiries, and in person advise prospective borrowers how to organize properly and to work up their projects suitably. The other decision was to establish and maintain relations with the individual cooperatives directly and not through intermediary organizations such as State or regional associations. In respect of this latter decision REA has favored State-wide associations of borrowers for the pursuit and protection of common interests, but it has at the same time maintained firmly its own direct relations, advisory and other, with each individual borrower. The REA interest has always been focused on the individual on the farm and his basic grass-roots group. These policies generated for REA problems of organization and procedure, and of discovery and codification of know-how. Although the nucleus organization consisted of experienced and skilled professional people, the new policies involved organization of a new field of application of their professional skills.

The REA organization had at the beginning been set up in a modest way, but great care was taken to secure carefully selected competent personnel: individuals aggressively sympathetic with the rural electrification concept and possessing exceptional professional skills for the positions for which they were chosen. This policy was favored by economic conditions, the depression market, and temporary lifting of civil service regulations, which made it possible to secure outstanding abilities at salaries offered by the Government. Incidentally, this at the time highly favorable situation proved eventually to be in several ways a disadvantage. When REA employment later came to be placed under civil service regulation the positions were classified in terms of high job specifications at depression salaries. When later the war and high salaries of intensified industrial activity enticed many employees away from REA, it became practically impossible to replace them with new employees of equivalent ability at the salaries that had become established. Perhaps most serious has been the influence of early simplicity of organization and meticulous economy, which established a base from which subsequent administrative budgets have been developed. REA has suffered the impact of across-the-board "economy programs" stimulated by Congressional efforts to effect economy without discrimination.

As a phase of preparation for a positive long-run program of rural electrification through cooperatives, in September 1936 an experienced industrial executive was secured as Deputy Administrator for organization and direction of detailed activities; and at the end of the same year an outstanding industrial engineer was brought in for special studies of organization and methods from which eventually were developed standards to reinforce executive energy in enabling REA to achieve and maintain an outstanding production pace. At the beginning provision had been made in the organization for the basic activities of finance and accounting, engineering, internal services, and information; and in October 1936 the first of a new line of functions required by the policy of building rural electrification on the basis of cooperatives was created in a development unit intended to make contact with, guide, and advise the emerging cooperatives. Organization and procedures developed along this line will be given further attention.

One of the first problems of special concern had been the design and cost of construction of rural electric distribution systems. Prior to the establishment of REA the prevailing cost of rural lines built by commercial utilities (essentially extensions of urban lines into rural areas) ranged from $1,500 to $2,000 and in some instances $2,500 per mile. REA engineers strove for simpler, sturdy construction suitable for rural conditions. New designs were

characterized chiefly by absence of cross arms and by stronger conductor and longer spans between poles, a type later to be utilized by commercial utilities. Design was not the only problem of REA engineers: they had to face also what appeared to be monopoly prices for components throughout the industry supplying them. By the end of 1936 REA was able to announce that an average cost of $941 per mile had been shown on nine projects located in regions with as diverse conditions as those of Wisconsin, Kentucky, Ohio, Pennsylvania, Virginia, Mississippi, Texas, and Idaho. This reduction of costs was to play a major part in the promotion of rural electrification by making projects economically feasible.

As has been indicated, the principal conditions that in 1936 and 1937 retarded progress in rural electrification were, in the first place, the lack of initiative on the part of many farm people, no matter how intense their desires, in effecting organizations and developing applications; and in the second place, the fact that from many of those manifesting initiative the applications were defective as to legal steps taken, or engineering design, or proof of pay-out feasibility. It became increasingly evident that REA must adapt its skills to meet these problems at their source, in order to avoid the waste of shuttling applications back and forth for seemingly endless working over.

There were other problems in respect of which applicants needed REA experience and skills. It had been assumed that wholesale power for borrowers' systems would be procured from near-by commercial power companies, but the tendency among these companies was to obstruct by excessive rates, by such clauses in contracts as one forbidding a cooperative to resell to its members at rates less than the commercial company charged its customers, or by clauses restricting them from providing customary special rate schedules for rural commercial, industrial, and similar consumers.

Negotiations in this field called for utility experience and skill not available to emerging cooperatives. Also applicants were faced with the problem of adequacy of State laws for the organization of cooperatives, or the introduction under commercial company inspiration in State legislatures of new bills unfavorable to cooperatives, or attempts by commercial power companies to subject the electric cooperatives, despite their nonprofit nature, to regulation by State utility commissions, or injunctions in the courts by commercial companies.

Problems of this order called for REA specialized legal guidance and assistance. A few commercial companies resorted to activities of an even lower order, such as sending representatives among the farm people of an emerging cooperative with untruthful statements concerning REA-financing: that a cooperative's current would not be as strong and effective as commercial company current; members in signing up for membership would be mortgaging their own properties; members would be personally liable for losses if the cooperative failed to pay out; and so on.

It was circumstances such as these that forced REA between 1937 and 1939 to develop an organization and procedures that would enable it to go into the field and guide applicants' activities from their beginning. Gradually REA assumed the responsibility, on receipt of a communication from a group of farm people that they desired electricity and wanted to make application for a loan, of sending to them various types of specialists who could advise them on such matters as effecting a legally adequate organization, securing an initial and expanded membership, designing a suitable system, negotiating with sources of wholesale power, securing certificates of necessity and rights of way, standing for their rights in conflicts with commercial companies before commissions and legislatures, and, when legislative authority was indefinite, introducing appropriate bills in legislatures.

Among the field activities was one of a dramatic nature, the "farm tour" or, as some called it, "the REA circus." In some localities the organizers of a cooperative were not in sufficient number to set up a project with sufficient consumption to yield the revenues necessary to pay out. These organizers undertook to influence neighbors not yet persuaded that they could make profitable use of electricity. In response to requests for aid REA organized a traveling demonstration caravan with its big tent and lesser tents. Manufacturers of electrical farm and household appliances were invited to send demonstration equipment. The response was generous, and farmers were enabled to observe such equipment in operation—grinding, hoisting, pumping, heating, cooling, refrigeration; and to hear talks on and demonstrations of cooking on electric ranges, dehydration, and deep freezing. These tours were generally regarded as a substantial educational influence.

To conduct such activities effectively and economically required extension of the REA organization, and the development of a suitable organiza-

tion and precise procedures. The record shows that by the end of 1937 the following new functional segments had been added to the organization: a Utilization Division that in the field advised a potential applicant community concerning the uses and benefits of electricity; an Examining Division not only for the examination of applications but for prior advice and assistance in developing applications of proper substance and form; a Coordinator of Engineering to bring all engineering skills of REA to bear on the problems of simplified design, cost estimates, and supervision of construction; and a Division of Operations Supervision not only to advise cooperatives in the initial stages of operation, but also to guide them in building membership and developing membership morale. At the same time the legal staff of REA was expanded to guide and assist on all problems having legal elements. These extensions of organization and the larger flow of valid applications compelled increase of the staff from 99 in June 1935 to 778 in June 1939.

Simultaneous with these extensions into the field, attention was given to the procedures involved in REA main office activities; appraisal and action on applications, and the planning and control of activities in the field. Production standards were formulated—at first rough but progressively refined—and weekly production control meetings were established. These were a creditable approximation to the best of corresponding devices of private enterprise. Their influence on REA productivity was notable. For instance, the Administrator was able to announce by the end of 1939 that standardization, short-cut methods, and increase of volume had reduced the average period between loan approval and construction contract from 36 weeks in 1936 to 12 weeks in 1939. During some periods of favorable weather conditions, aggregate line construction by borrowers proceeded at as high a rate as 560 miles per day.

Thus REA developed know-how and acquired momentum in giving advice and assistance to borrowers which, except for the war period, has been consistently maintained. Loans increased notably, and cumulatively as of June 30 each year were: 1938—$88,172,436; 1939—$227,236,949; 1940—$268,972,949; 1941—$369,027,621; 1942—$460,180,345. By the latter date the full effect of war conditions began to be felt, and there followed a few years of equally intense but diverted activity. During the years preceding the war, the farms connected, including connections by parallel activities of the commercial companies, as percentages of all farms increased from 10.9 percent in 1935 to 38.3 percent in 1942.

On July 1, 1939, under Reorganization Plan II,[8] REA ceased to be an independent agency and became a part of the Department of Agriculture, although its administrative integrity was retained. This move promoted more intimate contacts with other agencies concerned with the welfare of farmers, and underscored the basic concept that rural electrification is not merely a matter of mechanical technology but is a social force helping to mold the culture of rural life.

*REA's Contribution to the War Effort.* The Congress appropriated loan funds of $100,000,000 for each of the fiscal years 1941 and 1942. At the end of calendar 1941 the United States was at war, and for the fiscal years 1943, 1944, and 1945 the loan funds authorized were much smaller—$10,000,000, $20,000,000, and $25,000,000 respectively. The large loan funds authorized just before the United States declared war afforded the basis for substantial activity by REA in examining applications and earmarking funds for projects, which continued into the early years of the war. On the other hand, activities relating to construction were restricted because of scarcity of materials controlled in favor of war agencies. As early as 1941 procurement of materials by borrowers became more difficult, and the difficulty increased. By 1942 REA borrowers could procure materials only on authorizations, in case of each proposed use on a scale of priorities, by the War Production Board.

The effect on the progress of borrowers in construction of lines is indicated by the fact that whereas advances of funds for that purpose had averaged nearly $70,000,000 per year from 1938 to 1942, advances for 1943 and 1944 were only $15,000,000 and $18,000,000 respectively. This increased to $40,000,000 in 1945 and $87,000,000 in 1946; but normal activity was not resumed until 1947, when advances amounted to $190,000,000.

During the war period REA became temporarily converted by circumstances from an agency promoting the normal construction of rural lines to one aiding borrowers to concentrate construction and the use of materials on military, war industry, and food production needs. Among military needs were connections to provide power and light to air beacons, army camps, and navy installations.

[8] 4 Federal Register 2732; pursuant to the Reorganization Act of 1939, 53 Stat. 561.

Illustrative of war-industry needs was construction to provide energy for the production of aluminum.

Such needs affected only a limited number of borrowers. Nearly all of them, however, played a notable part in war food production. This was a war activity of major importance because man power was being lost from farms to military service or to war industries, and the production of essential foods and agricultural raw materials was threatened. Loss of man power stimulated the demand for electric energy by farms not yet connected.

This trend had been noted by REA even before the United States entered the war, and increase of food production was encouraged by REA a year before the vigorous and successful national Food-for-Freedom campaign was inaugurated by the Department of Agriculture. Under War Food Administration regulations REA-financed distribution systems were permitted construction materials only for connections of such applicants as were located near to existing lines and were able before official county boards to give proof that the connections applied for would contribute measurably to food production, one of the evidences of which was possession of a specified number of animal units. REA through its publications and field contacts encouraged and assisted borrowers to stimulate eligible farmers not yet connected to appear before county boards, make proof of eligibility, and apply for authorizations for materials. A temporary unit in REA aided such applicants in securing authorizations.

The influence of such activity on the part of REA is indicated by the fact that during these critical years when funds advanced were about 22 percent of the average of preceding years, the number of farms connected was approximately 50 percent of average. Perhaps a more striking indication is the fact that in the final months of fiscal 1945, when War Production Board limitation orders were expiring, the monthly rate of consumer connections by REA borrowers was approaching the prewar peak. Since each of the extensions presented a separate administrative problem, compelling made-to-order as contrasted with assembly line operations, the REA record of achievement and progress during this period is remarkable.

*Getting Ready for the Postwar Push.* During the 12-month period just preceding V-J Day, the REA staff was actively engaged in preparations for return toward mass production operations. It was necessary first to appraise the size of the job ahead and to estimate the financial requirements of the program. REA's preliminary report, *Rural Electrification After the War*, published in February 1945, presented these appraisals and estimates in some detail on the basis of a projected 5-year postwar program. Such appraisals and estimates have since been periodically re-examined and adjusted to reflect changing conditions.

A very substantial impetus was given to postwar preparations by the introduction of legislation in midsummer of 1944 by Senator Scott W. Lucas of Illinois which would have authorized REA to undertake the planning of a postwar shelf of projects. The first bill introduced by Senator Lucas would have given REA merely planning authority, including the authority to contract with outside agencies, and would not have provided loan funds for the purpose. However, in the early fall of 1944 Senator Lucas supplemented his bill by another to provide authorizations of $585,000,000 for rural electrification loans during the fiscal years 1945 to 1948.

About the same time final Congressional action was taken on the Department of Agriculture Organic Act of 1944 (the Pace Act),[9] which included provisions liberalizing the credit terms on REA loans by reducing the interest rate to 2 percent and extending the amortization period to 35 years, and eliminated the 10-year over-all time limitation on the program. This legislation furnished a very sound groundwork on which to base the accelerated postwar program. Its effectiveness in assisting REA to move forward vigorously with a program of area-coverage rural electrification is discussed in a later section.

Immediately on the convening of the new session of Congress in January 1945, Senator Lucas reintroduced his bill, and in May 1945 it passed the Senate together with a provision which would have re-established REA as an independent agency of the Government. Thereafter, hearings were held before a House Committee on a postwar planning bill, identical with Senator Lucas' bill, sponsored by Representative W. R. Poage of Texas. Testimony supporting the bill was heard by this committee in June 1945, but no action was taken during the summer. In October and November hearings were resumed, in the course of which utility witnesses representing various commercial power com-

[9] The Pace Act, approved Sept. 21, 1944; 58 Stat. 739.

panies and the Edison Electric Institute appeared in force in opposition to the bill.

The opposition revolved generally around claims that the funds were not needed because the job of rural electrification was substantially completed (notwithstanding the fact that not quite 50 percent of the farms were electrified); that the funds would be used for unnecessary and wasteful generation and transmission facilities (this in the face of growing power shortages); and that the funds would be improperly used for the acquisition of existing electric facilities (despite a record of very sparing use of REA loan funds for this purpose, funds being so used only where the acquisition is essential to electrification of unserved farms and establishments). It is significant that the utility trade press credited the organization of this opposition to the newly organized National Association of Electric Companies which was thereafter to become a very active factor on the Washington scene.

The chairman of the subcommittee which had held the hearings introduced a different version of a postwar bill on which he held additional hearings. This bill, more agreeable to commercial utility views, would have imposed limitations on the power of the Administrator to make loans for generation and transmission facilities and to finance the acquisition of any existing electrical facilities. No action was ever taken by the House Committee on any of these postwar planning bills.

By this time V-J Day had come and gone. The postwar period had arrived. The appropriation bills for 1946 and 1947 fully recognized the need for moving full speed ahead with the rural electrification program and made available $550,000,000 in loan authorizations for the fiscal years 1946 and 1947. For the fiscal year 1948 $400,000,000 in loan authorizations were provided. Thus through the regular appropriations channels, for the same three postwar years for which the original postwar bill would have provided $585,000,000, a total of $950,000,000 was actually provided for rural electrification. Authorizations have since been maintained at this high level.

*Full Speed Ahead.* A number of difficult problems were faced by REA in converting from a wartime to a peacetime economy. Although the Congress had made generous provision in the way of loan funds, there existed several very substantial obstacles in the way of moving forward with speed. The REA organization had been considerably contracted during the war years and required expansion to meet the needs of the postwar program. Trained technicians were hard to recruit, and it was a difficult job to build the staff up to the required level. However, this was largely done by the spring of 1947. Unfortunately, a severe blow was dealt the program at this very time when it was the utmost importance that progress be unimpeded. An economy move within the Congress led the House Appropriations Committee early in calendar 1947 to cut the proposed REA administrative fund for fiscal 1948 by over 28 percent from that of fiscal 1947. On top of this it was necessary to absorb mandatory pay increases. This particular appropriation had been preceded by repeated warnings to all agencies by the Congress that, in view of proposed budgetary reductions, "reductions in personnel must be undertaken at the earliest possible date," so that terminal leave costs could be borne by the fiscal 1947 instead of the reduced fiscal 1948 authorizations. Accordingly, to protect its program it was essential that REA immediately give notice of furlough to several hundred trained employees who had been recruited only after the greatest of difficulty. At the same time back-breaking requests were being received from the House Appropriations Committee for detailed information concerning the administration of the program, which meant the diversion of REA's reduced and overloaded man power in all segments of the organization to collection and preparation for submission of data going back over a number of years.

The damage done to the immediate administration of the program was great, but the damage to the morale of the employees was perhaps even greater. Because of the delay in clearing appropriation bills through the Senate and the Conference Committee at that time, it was not until three weeks after the beginning of the fiscal year, several months after the House action, that it was determined that most of the cut would be restored. By that time the damage was done. It took many months in the face of a rapidly expanding program, to restore the personnel to an effective operating level and to repair wounded morale.

Man-power shortages plagued the borrowers also, and these were accentuated by the rapid growth of the program. It soon became apparent in the postwar reconversion period that line construction materials would not be available in sufficient quantities to keep the construction pipe lines filled. In order best to utilize the curtailed supply of available materials, many of the systems

undertook construction of their short extensions with their own labor force. Such force account construction not only accentuated the systems' man-power problems but imposed additional burdens on REA personnel, as each of the extensions was covered by a work order which required individual checking before advance of funds.

Material bottlenecks became acute. Immediately after V-J Day it was apparent that the pole supply would be inadequate. A very acute supply situation which developed in Texas was resolved by a loan to a group of Texas cooperatives for the purchase of pole creosoting plants in Texas. After a series of conferences with individual suppliers, a general meeting was held in the fall of 1945 with all segments of the pole industry to explore ways and means of breaking the bottleneck. While these conferences eased the supply situation to a degree, poles did not become available in adequate quantites until after REA had established a small task force of experts who explored the pole supply situation in the field and stimultated increase of production by existing suppliers and by new enterprises that entered the field in response to the increased demand.

Transformers, pole hardware, and other line construction components were in short supply. Vigorous efforts on the part of REA were so successful that by the close of 1948 all of these bottlenecks had been eliminated to such a degree that a new bottleneck was created—conductor.

In the midst of all this expanding postwar activity two inquiries were made by the Senate Committee on Civil Service. The first, aimed at REA personnel practices but developed to cover the administration of the program generally, resulted in the issuance of "a clean bill of health" by the Chairman of the Committee conducting the study. The second survey was aimed at determining whether the material supply situation could be ameliorated in any way. Shortly after the latter survey was completed, as a result of the successful efforts of REA-financed systems in bringing another aluminum producer into the conductor field, the breaking of the last bottleneck—conductor—was accomplished.

The extent to which full speed ahead was being attained is best demonstrated by the fact that consumers in the latter months of 1948 were being connected to REA systems at a rate of over 40,000 per month, exceeding all previous records. It is noteworthy that approximately three out of every four farms now being connected to highlines in the United States are being served by REA-financed systems; the remaining job being done by the commercial power companies and various public agencies including municipalities.

A more inclusive picture of how the postwar task has been achieved is indicated by the following cumulative data:

| *As of* | *Loans Approved* | *Funds Advanced* | *Energized Miles Constructed* | *Consumers Connected* |
|---|---|---|---|---|
| June 1945 | $524,542,502 | $427,566,738 | 424,072 | 1,287,347 |
| June 1946 | 813,914,990 | 514,819,844 | 474,837 | 1,549,057 |
| June 1947 | 1,068,436,162 | 704,905,701 | 546,781 | 1,843,351 |
| June 1948 | 1,381,459,261 | 951,141,658 | 666,156 | 2,263,869 |
| June 1949 | 1,830,318,858 | 1,272,428,526 | 839,685 | 2,778,180 |

Including the rural connections made by other public and by private agencies the number of farms electrified, as a percentage of all farms, increased from 44.7 percent in 1945 to 78.2 percent at the end of June 1949.

*The Postwar REA*. This impressive postwar acceleration of the REA program would normally have been expected to require a very substantial increase in REA personnel. However, despite the additional burdens placed on it, the agency in calendar 1948 had an average of only 1,003 employees; which was a ratio of one employee per borrower—one employee per borrower that on the average represented a million-dollar corporation. The development of an effective organization of this nature required intensive studies of objective, policies, and organization; and the further development of effective procedures economical of man power.

Through various steps, by 1946 the organization had been developed to the present structure. The line divisions, *i.e.*, those having direct relations with borrowers, are: *Applications and Loans Division*, responsible for examination of applications, for recommending loans to the Administrator, and for guidance to borrowers in preparatory steps; *Engineering Division*, responsible for the approval of the design of borrowers' systems, inspection of

construction, and final inspection and approval of the properties that are the security for loans; *Management Division*, responsible for advice and assistance to borrowers in respect to their operating and general management problems; *Finance Division*, responsible for audit of accounts of borrowers, receipt of payments, advances of funds, and the accounting for transactions with the Treasury, other Government agencies, and borrowers. Auxiliary or consulting or service divisions are: *Administrative Services Division*, responsible for communication and records, administrative accounting, travel, property and space, operating records, and statistical services; *Information Services Division*, responsible for publications, press and radio service, and cooperative education; *Personnel Division*, responsible for employment of REA personnel, classification, training, safety and health, stenographic pool, and personnel records; *Technical Standards Division*, concerned with establishment of electric construction and use standards, electro-agriculture, and new developments. Attached to the *Administrator's Office* is a staff responsible for program analysis, organization, procedures, the budget, and a flow of variable problems concerned with activities of borrowers requiring high level attention. *Legal services* are furnished by the two Rural Electrification Divisions in the Office of the Solicitor of the Department of Agriculture, legal services having been taken out of the REA organization by action of the Appropriations Committee in 1941. In 1948 there was added the *Power Division*, a line division responsible for inspection and provision of technical assistance in the design, construction, and management of generation plants and transmission lines, a development made necessary by increase of borrowers' problems arising out of power shortage.

Production control has been brought to a higher effectiveness through production control devices and meetings under the personal attention of the Deputy Administrator. Thus know-how, procedures, and controls, developed basically in 1937–1939 and refined through subsequent years, had by 1945 freed top administration of REA, facing postwar problems, for more attention to matters of long-run and fundamental significance.

*Borrowers as Private Enterprises.* Beginning in 1945 the Administrator in internal orders and public utterances placed an increasing emphasis on the fact that REA borrowers are private, not public, enterprises. This had been the legal and conceptual fact from the beginning, but it was not emphasized during the years of strenuous effort to develop know-how and get lines built. REA borrowers are private enterprises, it was emphasized, just as much as are the commercial companies. While the fundamental difference is in motivation—service or profits—for our immediate purpose the difference is that REA borrowers receive investment funds from and are influenced by a public money source, while the commercial companies receive investment funds from and are influenced by the private money market. Both types of utilities own and operate their properties, with such limitations in both instances as arise from legislation and from debtor-creditor relationships. In the vision of REA, relatively small independent million-dollar grass-roots enterprises, such as are represented by REA borrowers, are a wholesome component in a democratic national economy. Emphasis on this basic fact was essentially the declaration of a fifth fundamental policy of REA; relations with borrowers should be relations with independent corporations who own and manage their enterprises. This led to gradual modification of REA subordinate policies and activities.

When the cooperatives were young, inexperienced, and struggling against obstacles, it had been necessary to give advice and assistance to all of them, and in considerable detail, both in their interest and in the interest of security for the government loans. There was ample justification for this: the cooperatives were new and their members and directors without experience in constructing and operating electric distribution systems; and the government loans are 100 percent loans, *i.e.*, the security is the physical facilities financed by a loan. Proper construction and efficient economical operation are of the essence of the security for the loan.

By 1945, however, a number of borrowers had had seven or eight years experience and many others more than five years experience, and accordingly there was a transition to a new policy of advice and assistance, and new practices began to be developed. Visits, inspections, audits, advice, and assistance of the REA field staff were put on a selective basis; regularly to new cooperatives and to older ones whose financial struggles still gave concern; on request to the others. Requests for assistance did not cease, because new problems on a higher level—rate adjustments, increase of capacity, and so on—were filling the place of earlier simpler problems. In respect of auditing general

accounts, cooperatives that met certain standards of age and financial condition ceased to be audited by REA auditors, and were required to employ certified public accountants, as business does generally. Thus these independent businesses were thrown more and more on their own, and REA was able to stretch its limited man power over a larger volume of lending, supervision of design and new construction, and major problems of cooperative management.

Another consequence of emphasis on cooperatives as private enterprises was more serious development of activities of broadly educational character looking toward the time when borrowers would have amortized their loans, become free of debtor-creditor influences, and be completely on their own. Probability of their continuing success and stability depended primarily on two things; first, complete understanding of the principles governing the form of organization which they had assumed as cooperatives—the need of membership esprit-de-corps, of sound community relations, of clear understanding of the responsibilities of members, directors, and operating management, and of eternal vigilance concerning the trend of their affairs; and second, understanding of and insistence on sound business management, rational promotion of the uses of electricity, and efficient, economical maintenance and operation of the properties.

Accordingly through REA publications—*Rural Electrification News* and special bulletins—public addresses on occasion by REA officials, cooperation with State associations of cooperatives organized by themselves, and regional conferences of directors and managers promoted by REA, increasing attention came to be given to problems of cooperative organization and to procedures of efficient management. The evolution of regional conferences is an interesting story. Begun as REA institutions to which directors and managers were invited, they inspired parallel conferences organized by cooperatives to which representatives of REA are invited. Supplementing cooperatives' State associations is the National Rural Electric Cooperatives Association with offices and a well organized staff in Washington; a constructively influential institution organized by borrowers and administered independently of REA.

Among the innumerable phases of electric distribution organization and management included among the activities noted above, several are worthy of special attention here. We have observed that in his letter of November 14, 1935 to Senator Norris the first Administrator had emphasized "complete coverage of an area." This concept remained controlling in REA but was not particularly emphasized during the years of rapid construction of nuclear systems. During the postwar period, however, with nearly a thousand such nuclear systems in existence, the problem of area coverage, carrying with it problems of unelectrified farm surveys, system studies, planning of extensions, and increasing the capacity to carry loads not previously envisioned, came to the fore and was given emphasis in discussion and in action. As has already been mentioned, enactment of the Pace Act in 1944 provided more liberal terms and made it possible for many cooperatives to qualify new sections as to feasibility. The judgment of the Congress in providing more liberal credit terms has been fully justified by the extent to which borrowers have been able to carry out the area-coverage concept.

Another phase of cooperative management that headed up during the postwar period is the matter of capital credits. It is a basic concept of the cooperative form of enterprise that there shall not be an excess of revenues over expenses. Good management, however, requires that prices shall be such as to give assurance that revenues cover all costs, which usually results in a plus margin at the end of an operating period. The common practice of marketing cooperatives is to return such margins annually to members as patronage dividends. All bylaws of REA cooperatives recognize the principle. But application of the principle is more difficult for the electric distribution business than for a marketing business, because the former is a business whose capital is invested chiefly in physical properties subject to deterioration, and to maintenance, replacement, and other variable and contingent costs.

A collateral problem is that REA borrowers' retail rate schedules have always been so constructed as to yield revenues not only to cover costs of operation, maintenance, and replacement, but also to provide funds required by the schedule of loan repayments. The fact that these two components are not stated separately on the schedules has led to much confusion of thought, especially among outside analysts attempting to compare cooperative with commercial rates.

Some resolution of these difficulties has been achieved through a scheme of capital credits whereby that part of a member's bill required to

cover his prorata share of operating cost is considered an energy charge; and any excess constitutes his prorata contribution of capital for debt retirement, to be credited to him individually, become his share of equity, and in the course of time be returned to him in accordance with a rational pattern.

*The Postwar Power Supply Problem.* A major problem of the postwar period was that of power shortage. The war had put a tremendous strain on the capacity of commercial companies to produce energy. In fact, the total requirement could not have been met were it not for power generated by public facilities in the Tennessee Valley, and at Hoover Dam, Bonneville, and Grand Coulee. The commercial utilities must be given due credit for a splendid job done during the war in regions dependent entirely on their facilities. However, the motivation of the industry—opposition to additional public facilities—has been such that their public statements have consistently underestimated the dangerously narrow margin between potential and actual production of power.

REA borrowers were not misled, because of difficulties they experienced in the procurement of wholesale power from commercial utilities in numerous localities throughout the United States. This compelled reluctant increase of loans to them by REA for construction of their own generating plants and, as has been noted, the addition to the REA organization of a Power Division.

The problem of assuring sources of energy for borrowers has been resolved by REA in a sixth and a seventh fundamental policy decision. One of these is that generation and transmission loans are made under limited conditions: when there is not an adequate available source; when proposed wholesale rates are unreasonably high; when they carry unreasonable conditions or limitations; or when a saving in cost may be effected. During and since the war the first of these circumstances has been emphasized by the dangerous shortage of power. In consequence such loans reached an annual average of $22,793,089 for the five years 1944–1948 as compared with an average of $5,273,268 for the eight years 1935–1943.

The other policy is that such loans are made primarily to meet the needs of REA-financed electric distribution systems: to enable any one of them that finds it impossible to procure wholesale energy, or to negotiate a reasonable rate, to generate its own power; or to enable a group of contiguous borrowers facing similar problems to organize jointly a generating cooperative for service to themselves. REA policy clearly requires that the basic purpose of any loans for generating facilities or transmission lines be the accomplishment of one or more of these objectives.

During the postwar period the opposition of the commercial utilities to REA and REA-financed cooperatives continued with even greater energy, but it took more subtle tactical forms. Resort to spite-line and cream-skimming activities decreased as the percentage of farms electrified and the elimination of cream spots in rural areas increased. But other forms of activity took the place of these, especially organized efforts to influence legislation prejudicial to REA and its borrowers at Washington and throughout the States.

The fact that cooperatives and public bodies were given a preference in the Federal statutes providing for the sale of power developed at Federal installations made these systems an incidental target for attack by those interests which sought to have the Federal power policies amended. Legislation was introduced in the Eightieth Congress which would in effect have taken away from the Federal power agencies the right to build transmission lines to bring federally developed power to market and would have required the sale of such power at bus bar. This would have deprived REA-financed systems of an opportunity to share in the benefits of this plentiful low-cost power as very few if any of them were in position to build the heavy transmission lines required to transmit this power the distances involved. None of this legislation was enacted.

A recent activity pointing in this direction was represented by the reports of the task-force groups which conducted surveys in this field for the Hoover Commission on Reorganization of the Executive Branch. The Commission itself split so widely on this issue that the task-force recommendations were not adopted, and its major report on Government power activities contained no recommendations.

Notable is the policy of commercial utilities in national advertising to refer to themselves as "business-managed, tax-paying" enterprises, thereby implying that nonprofit enterprises such as REA-financed cooperatives are not managed in accordance with sound business principles and do not pay their share of taxes. As for management, the record of REA cooperatives is outstanding in that they not only cover operating expenses but retire fixed investment loans, the latter being

something the commercial companies do not undertake. As for taxes, the cooperatives of course do not pay an income tax because they are nonprofit corporations and have no base to which to apply such a tax; but in the matter of property and other local taxes they carry their share as required by the laws of a State.

Most notable, however, has been the commercial company practice of identifying these local private businesses financed by REA with the public power movement. The public power movement as represented by the great Federal multi-purpose dams is considered a menace by the commercial companies, and they feel they can afford great expense for combating it. The director of their Washington office is reputed to be the highest salaried lobbyist at the seat of government. By identifying the rural electrification movement with the public power movement the commercial utilities are able to make this lobby inspired by fear of public power serve in their campaign against the REA program. Under its direction, at hearings of appropriation committees as well as in the press and special articles, big names are brought into the fight against REA. And weird arguments and statistics are presented; such as those, presented periodically since 1935, designed to persuade the people and the Congress that the rural electrification job has been completed and that there is no longer a need for the REA program.

*The Task Ahead.* The progress of rural electrification, in number of farms connected, quantity of electricity consumed, range of uses, and influence on the rural economy, is modifying progressively the problems and objectives of REA. Measured only in terms of farms remaining to be connected the REA program is three-fourths completed. The final one-fourth of this particular phase of the program will not be achieved easily, because many remaining farms are in localities of relatively lower density or relatively lower income, and calculations of economic feasibility become correspondingly difficult. Suggestions have been made that in order more promptly to bring electric service to those areas on an economically feasible and self-liquidating basis the period of amortization of REA loans for the construction of the facilities required for these areas should be on a 50-year basis. In fact, the 35-year period established by the Pace Act was a compromise between the 25 years of the original act and the 50 years suggested by many in 1944. It is not unlikely that making central station service available to the final 10 percent of farms will present new problems of statesmanship to the Congress, involving new concepts of national investment in the future welfare of our total rural economy.

From other points of view—especially dollars of over-all investment—the program appears to be not more than half completed. One phase is provision of adequate sources of power for many REA-financed borrowers, whose loads are beyond the most optimistic assumptions of ten years ago. Notwithstanding Federal development of large hydro power sources, and plans for new generating facilities on the part of commercial companies, many borrowers will not be within economical reach of such power. Many of them will have to make individual or group investments in facilities for basic energy of their own production and transmission. The United States is a big country, and neither big dams nor large commercial generating centers are distributed uniformly.

Another phase is that of "heavying up" lines already constructed. The present load on rural lines was not envisioned at the time REA was established. Under the circumstances the lines were designed for moderate loads, and especially for moderate costs. Even if eventual consumption could have been foreseen by some planners, farm people would have been reluctant at that time to make the investment necessary to carry the ultimate loads. Eager as they were for electricity they did not foresee the great use they would make of it. Lights for the household, the stables, and the yard were then the greater part of their vision. This was normal psychology. Now it has been discovered that many systems are overtaxed by their loads, and an important phase of the REA program ahead is the making of supplementary loans for heavying-up the facilities of these earlier borrowers.

*Rural Telephone Program: Extension of the "REA Pattern."* On October 28, 1949 President Truman signed H. R. 2960,[10] amending the Rural Electrification Act of 1936 to provide for a rural telephone loan program. The President's approval of the bill culminated a legislative effort of about five years to bring rural communications facilities to the same twentieth century standard as has been achieved by the "REA pattern" in the rural power field.

By making Federal credit available on a self-liquidating basis and on liberal terms—2 percent interest and a 35-year amortization period—local private enterprise will be assisted in providing an

[10] Public Law 423, 81 Congress, 1 session.

essential rural telephone service. Service—pursuant to the REA pattern of area coverage—is to be available on the same basis for all persons in a service area. This is explicitly required by the Congressional declaration of policy: " . . . it is hereby declared to be the policy of the Congress that adequate telephone service be made generally available in rural areas . . . to the widest practicable number of rural users of such service." The act specifically requires that the REA Administrator in making loans obtain assurance that this principle be carried out.

As has been pointed out, the REA electrification program has largely been conducted by cooperatives and public bodies which, under the 1936 Act, are given preference with respect to loans. The new act deviates from this pattern in the requirement that preference with respect to loans for rural telephone service be given to those already providing telephone service in rural areas—existing systems both commercial and nonprofit, and cooperative, nonprofit, limited dividend, or mutual associations. There is no provision for loans to public bodies, such as State and local subdivisions and agencies, municipalities, and public power districts. The preference to existing systems is strengthened by a further requirement that during the first year of the program, their applications shall be considered and acted upon before action is taken on applications from others for loans for the purpose of serving substantially the same subscribers. It will be interesting to note the extent to which this deviation from the REA pattern will promote or retard the accomplishment of the Congressional objective.

As of the date of enactment of the telephone loan enabling law, approximately 40 percent of farms had telephone service. Much of this is unreliable and inadequate and represents very little change since the previous peak in rural telephone coverage—38.7 percent in 1920. By way of contrast, it is significant that almost 80 percent of farms have central station electric service today as compared with less than 2 percent in 1920 and 10.9 percent in 1935 when the REA program was inaugurated.

Enactment of the rural telephone legislation affords both an opportunity and a challenge—an opportunity for America's rural people to secure modern communication service—and a challenge to both the telephone industry and to rural people alike to cooperate and work effectively to attain the goals delineated by the Congress. Time alone will tell how the opportunity and challenge are met.

*Achievements and Outlook.* What electrification means to rural life is vastly more important than statistics of achievement, but these should first be summed up briefly.

The Congress on its part for the 14 years to the end of June 1949 generously made authorizations of loan funds to the amount of $1,875,428,288. On the part of REA, $1,830,318,858 of loans was approved, of which $1,575,057,155 was for distribution systems, $241,152,115 for generation and transmission, and $14,109,588 for consumers' facilities. Of this total, $1,272,428,526 was advanced to borrowers to meet the cost of their construction programs. A total of 1,054 borrowers consisted of 965 cooperatives, 64 public bodies, and 25 commercial power companies. During the period REA gave these borrowers painstaking professional guidance and assistance. On their part the borrowers by the end of the period had constructed and were operating 839,685 miles of energized lines, were serving 2,778,180 rural consumers, and had proved to be, directly and through stimulation of the commercial companies, the principal force increasing the proportion of farms receiving central station service from less than 11 percent in 1935 to an estimated 78.2 percent at the middle of 1949. Their local systems in the aggregate at the end of June 1949 were purchasing energy at the rate of over 6,000,000,000 kwh per year, and generating for themselves at the rate of approximately 1,000,000,000 kwh. Their aggregate annual revenues were approximately $200,000,000. They had paid the Government $203,694,497 principal and interest, of which $19,281,893, or over 10 percent of payments, was in advance of schedule, the amount overdue being $976,145, or 0.5 percent of schedule. Rural electrification had within 14 years become, from the point of view of dollars and miles and people served, a great social institution.

That it is a great social institution is indicated even more forcefully by the trend of actual use of electricity by farm people. The data are inadequate but they carry a punch. The over-all figures of REA-financed cooperatives are as follows: from no consumption prior to 1935 to 131 kwh per month in December 1948. However, these over-all figures are highly diluted because of the addition of new consumers, at times at the rate of 40,000 per month. New consumers start with moderate use and affect the over-all average substantially. The data for some individual States where area cover-

age is more nearly completed are more enlightening. For December 1948 these data were, for kwh per month: Iowa, 213; Minnesota, 211; Ohio, 182; Wisconsin, 194. Among ranch States having large-scale users the consumption per month was: Idaho, 211 kwh; Montana, 211; Oregon, 268; Washington, 408; Nevada, 713. Another over-all picture involving only moderate dilution is that presented in the data published by Edison Electric Institute, which covers all farms served by both commercial companies and REA borrowers east of the 100th meridian (thereby eliminating the influence of large-scale irrigation). These data show an increase of kwh average consumption per month from 51.5 in 1927 to 166.4 in 1948. REA has initiated some special studies that eliminate all influence of dilution; by major types of farming areas, the actual increase in consumption of the first 100 farms connected on REA-financed cooperatives. Already 8 systems have been studied in the States of Ohio, Indiana, Illinois, Iowa, Missouri, Minnesota, and North Dakota. In these instances the average consumption has increased from 44.5 kwh per month in 1937 to 276 kwh in 1948. It is interesting to note that according to Edison Electric Institute data the average kwh consumption per month in 1948 for all residential or domestic service (chiefly urban) was 36 kwh less than the average monthly consumption on farms. All these data indicate that much electricity has come to flow over the wires connecting American farms since the report of the subcommittee of the commercial industry to the Administrator in 1935, which stated that farms that could use electricity profitably had already been connected and any further use of electricity would be for household purposes.

The range of uses of electricity on farms has become impressive. At the time REA was organized its specialists compiled a list of about 200 uses, and this was at the time dismissed by experienced leaders as fanciful. Yet when in 1949 REA brought out a similar list carrying some 400 uses it was accepted almost without comment. The competition of REA had stimulated development of uses and benefits that previously had not been included among commercial company standards. The producers of electrical equipment had come to realize that a great new market was being brought into being, and their merchandising met the challenge. Electric pumps to provide water for irrigation, and for the barns, the dairy, and the household. Electric motors for grinding feed, hoisting and storing hay, sharpening cutting tools, and miscellaneous maintenance work in the tool house on farm equipment. Electricity in the form of heat for chicken hatching and brooding, for brooding of young pigs with a saving of a substantial proportion of the number farrowed, and for hot beds. Electricity in the form of refrigeration in the dairy and the kitchen, with a lifting of the quality and price of milk for the commercial market. Contributing to the conveniences and comforts of life, in the household adequate lighting, running water and bathrooms, electric ranges, the radio for current news and entertainment, toasters, fans, and everything electric previously enjoyed only by urban dwellers. For the rural community, adequately lighted schools, churches, and town halls. Electricity had taken an outstanding position alongside motor vehicles, good roads, and the telephone as a cultural force narrowing the gap between the conditions of rural and those of urban living.

Notable has been the influence of rural electrification on rural citizens as business men and business women. The farmer has always been an able and shrewd business man in his field—shrewd as a producer of farm products, as trader, and in the management of trading cooperatives. But it was a limited field. When the rural electric cooperative was first seriously considered as an instrument of rural electrification, it was asserted by some that people of farm background would not be able to organize and manage so highly technical an enterprise any better than a group of city merchants could go into the country and manage successfully a farming enterprise. But rural people—both men and women—accepted this challenge and have demonstrated capacity to manage successfully a type of enterprise far outside the boundaries of their previous experience. From the point of view of financial status, a cross section of REA-financed cooperatives need have no fear of comparison with a corresponding cross section of business generally.

Perhaps most significant of all is the decentralization and democratization of industry presented by the rural electrification cooperatives. Centralization of industry and the increase in size of great corporations have generated serious public problems and will generate still more serious problems. But in rural electrification through cooperatives we are witnessing a development in the opposite direction, which in the course of time may serve as an exemplar of similar stimulated developments in other areas of industry.

On occasion Senator George W. Norris used to tell about his boyhood days on an Ohio farm. His

remarks were profoundly touching, not because of the description of the drudgery he as a boy had to endure, but because of the description of the extreme drudgery of his widowed mother's life on the farm of those early days. Apparently recollection of the circumstances under which his mother labored had been a continuing sorrow to him, and had been perhaps a mainspring to his creative work as statesman on behalf of rural people. As a by-product of great statesmanship he erected his own monument; and no statesman of any country in any age ever created a greater and more enduring monument of a career than the Tennessee Valley Authority and the Rural Electrification Administration.

# THE NEGRO IN THE AGARIAN REVOLT

JACK ABRAMOWITZ

*Teachers College, Columbia University*

The deficiencies in the historiography of the American Negro lie mainly in the realm of omission, and nowhere is this so apparent as in the treatment of the Negro in the years 1876–1896. After investigating the periods of slavery, the Civil War, and Reconstruction in lengthy and scholarly detail, the historians have ceased to study the Negro. There are sociological surveys of the Negro in the twentieth century, but just what happened to the Negro people between the end of Reconstruction and the beginning of the present century remains very unclear.[1]

The last quarter of the nineteenth century were years of political and intellectual ferment for the rest of the Nation. In the rural areas the decline of farm prices brought on a tidal wave of agrarian protest as reduced incomes and increased costs due to monopolistic practices drove farmers over the brink of economic disaster. A multitude of organizations, economic and political, were formed and dissolved as the hapless farmer sought to beat his way out of the jungle of sub-subsistence livelihood.

What of the Negro farmer during this period? Since most of them were located in the South we must look to the condition of agriculture in that region. With cotton dropping from 31 cents a pound in 1866 to 9 cents in 1886 and 6 cents in 1893,[2] the margin of existence for most Negro farmers was virtually wiped out. This is demonstrated in a contemporary study.[3] The author recorded that the economic results of the year 1898 upon 271 Negro families in a Georgia district were: Bankrupt and sold out, 3; $100 or more in debt, 61; $25 to $50 in debt, 54; $1 to $25 in debt, 47; cleared nothing, 53; $1 to $25 cleared, 27; $25 to $100 cleared, 21; and $100 or more cleared, 5. The same author also noted: "The legal rate of interest is 8 per cent, but no Negro ever borrows money at this rate. Ten per cent. per year is considered cheap, while on short terms the rate is often 10 per cent. per week."

In the face of so dismal an economic existence it would be surprising indeed if the Negro farmer had not organized to better his lot. It is the purpose of this article to show that Negro farmers played a meaningful role in the agrarian upheaval of the 1880s and 1890s. Deserted by their Republican allies after 1876, they fought back against economic and political adversity in a multitude of ways. Some remained in the Republican Party and fought a losing battle within its ranks against the Lily-white forces. Others migrated North in a most significant exodus after 1876. Still others pushed on to new areas of struggle and through the Greenback, Alliance, and Populist movements sought to find a way out of the "freeze-out" conducted by both major parties.

The material in this article is by no means a definitive collation of source materials. Most of the sources have not yet been tapped and will doubtless yield a rich harvest of data when investigated. Because the author has been unable to undertake the necessary extensive travel to the

[1] An exception is John Hope Franklin's recent work, *From Slavery to Freedom* (New York, 1947), which is an admirable synthesis of Negro history. Pages 328–338 relate to the period 1876–1896.

[2] Samuel Eliot Morison and Henry Steele Commager, *The Growth of the American Republic* (New York, 1942), 2:204.

[3] Carl Kelsey, *The Negro Farmer* (Chicago, 1903), 46, 52.

sources of information it is his hope that the material presented in this article will attract others to this fascinating subject and enable the facts to be brought to light. A study of this aspect of Negro life cannot but broaden and enrich the meaning of the American agrarian movement.

The earliest post-bellum farm organization of any significance was the Patrons of Husbandry, formed in 1867 by Oliver H. Kelley and a small group of clerks and intellectuals in Washington, D. C.[4] It is not clear whether Negroes were ever admitted to the local Granges set up by this organization, and no careful search of the records has been undertaken to determine Negro membership. On this subject the most authoritative work on the Granger movement says:

> In the South the question of organization for the negro farmers received some attention. Occasionally northern Grangers, ignorant of conditions in the South, advised their southern brethren to admit the negroes into their granges, and the master of the Missouri State Grange declared his intention to organize separate granges for them, but there is no evidence that any negroes ever became members of the order.[5]

Though the Granger movement became important as the force behind reform through various State legislatures, the Grange itself did not enter politics directly. The outstanding political force of the agrarian rebels of the 1870s and early 1880s was the Greenback Labor Party. In its early years this party was supported by Eastern union labor groups, but its inflationary policy soon attracted the debt-ridden farmers who quickly took over the organization. The degree of Negro participation has not been investigated to any substantial degree, but the interest of Negroes in the movement is suggested by the participation of C. W. Thompson, Negro leader of the Richmond, Virginia, Tobacco Laborers' Union, in the founding convention of the party at Cleveland, Ohio, in March 1875.[6]

In the Texas organization there was much active Negro work. At the first State convention of Independent Greenback clubs at Austin on March 12, 1878, there were eight or ten Negroes among the forty delegates. The convention adopted a platform which said in part: "The object of our republican government is to protect alike the rights of every individual in the union, irrespective of section, State, riches, poverty, race, color or creed." Five months later a convention of the Greenback Labor Party of the State was held, and of the 482 clubs represented, there were 70 clubs composed of Negroes.[7]

The very first issue of the Greenback newspaper, the *National View*, included an article by Frederick Douglass urging Negroes not to participate in the mass migration from the South which had begun in 1878 as a direct result of the collapse of Reconstruction two years before.[8] Why such an article should appear in a Greenback paper is not clear, but since Douglass began the article by stating that he was writing it at the request of the editors we may assume the purpose was to reach the Negro membership of the party.

Further evidence of the advanced views of the Greenback movement can be found in the platform of the Texas Greenback Party in 1880 which denounced voting restrictions in these words: "The Greenback Labor party everywhere denounces the attempted disfranchisement of citizens as a crime, whether committed by Republicans in Massachusetts and Rhode Island or Bourbon Democrats in Texas, and denounces all laws restricting the right of suffrage. . . ."[9]

Unfortunately, these views of the Greenbackers have been largely overlooked, and the movement has been treated from the viewpoint of economic orthodoxy. With the collapse of the Greenback movement after 1884, the liberal attitude of the organization was adopted, in large measure, by the Alliance movement.

As is well known the main Alliance organization was the National Farmers' Alliance and Industrial Union, more commonly known as the Southern Alliance, which had its strength in Southern and Border States. Originating in 1879 as a Texas cattlemen's protective group, the organization spread rapidly during the 1880s and merged with the Louisiana Farmers' Union and the Wheel and

[4] Solon J. Buck, *The Agrarian Crusade* (New Haven, 1920), 1–10. There is a very striking parallel between the early leaders of the Grange and the Narodniki or Russian populist movement of the 1880s. In both instances the movement was initiated by urban intellectuals who glorified the role of the farmer in society. In the case of the Grangers, the movement was soon taken over by real farmers while the Narodniki remained an intellectual sect which "went to the people."

[5] Solon J. Buck, *The Granger Movement* (Cambridge, Mass., 1913), 74.

[6] Philip S. Foner, *History of the Labor Movement in the United States* (New York, 1947), 1:477.

[7] Ernest W. Winkler, *Platforms of Political Parties in Texas* (Austin, 1916), 180–187.

[8] *National View* (Washington, D. C.), May 3, 1879.

[9] Winkler, *Platforms*, 200.

Alliance groups of Tennessee, Mississippi, Texas, Kentucky, Missouri, and Indian Territory to form the National Farmers' Alliance and Industrial Union in 1889.[10] This organization was specifically limited to white members in contrast to the National Farmers' Alliance, or Northern Alliance, which admitted Negroes to membership.

Though the Southern Alliance barred Negroes from membership, it took an active interest in the formation of the Colored Farmers' National Alliance and Cooperative Union. This organization was founded in Houston County, Texas, on December 11, 1886, as a local farm organization. On December 29, 1886, the Houston group, plus leaders of farm clubs in several other counties, met in the Good Hope Baptist Church at Weldon, Texas, and founded the Alliance of Colored Farmers of Texas. By 1888 this organization had grown to national status. R. M. Humphrey, a white Baptist missionary, was elected to serve as general superintendent, but all other officials appear to have been Negroes.[11]

Because it has not yet been possible to locate the records of the Colored Alliance the information regarding membership, activities, and leadership of the organization must necessarily be culled from diverse sources of both primary and secondary nature.

The membership of the Colored Alliance was set at over a million by *Appletons' Annual Cyclopaedia*. Hicks set the membership at one and a quarter million with a dozen complete State organizations. In 1891 Humphrey recorded the membership as 1,200,000, including 300,000 females, 150,000 males under 21 years of age, and 750,000 adult males.[12] The Colored Alliance in North Carolina claimed 55,000 members while the Virginia organization asserted it had 20,000 members in 1891.[13] There is little evidence existing to provide a genuine check on any of these figures, and it is entirely possible that they are exaggerated. However, there can be little question that the Colored Alliance attained considerable strength. Nowhere has their membership been estimated at less than 800,000, and nearly everyone accepts the figure of one million.

The activities of the Colored Alliance were apparently of a varied nature and included economic, social, and some educational work. In July 1888, a network of cooperative exchanges was ordered established by President J. J. Shuffer, one of the original founders of the organization. The exchanges were reportedly located in Houston, Texas; New Orleans, Louisiana; Mobile, Alabama; Charleston, South Carolina; and Norfolk, Virginia.[14]

There is no information available regarding the work of these exchanges, but it is significant that on December 1, 1890, the annual meeting of the State Business Agents Association at Ocala, Florida, admitted R. M. Humphrey and J. J. Rogers to membership as representatives of the Colored Alliance.[15] This association had been established as a standing committee of the Supreme Council of the Southern Alliance, apparently for the purpose of guiding the conduct of the cooperative organizations.

J. J. Rogers, the Colored Alliance appointee, was a native of Virginia and represented that State and North Carolina. Upon admission to the State Business Agents Association he was appointed by that body to serve as one of a committee of three to edit a weekly column in the *Economist*. He later served as a delegate of the Colored Alliance to the joint meeting of all the Alliances and other groups in Washington, D. C., on January 22, 1891, which established a Confederation of Industrial Organizations.[16]

To bring the message of the Alliance to its membership, the organization established a weekly newspaper called the *National Alliance* at Houston, Texas, in 1889.[17] To date no copy of this paper has been located despite a rather extensive inquiry conducted by this writer. However, there is mention of the paper on several occasions in the files of the *Economist* where the column labeled "Reform

[10] The National Wheel apparently admitted Negroes to membership in separate lodges. See Buck, *The Agrarian Crusade*, 117. For the history of the Alliance movement, see *ibid.*, 111–193; and John D. Hicks, *The Populist Revolt* (Minneapolis, 1931).

[11] R. M. Humphrey, "History of the Colored Farmers' National Alliance and Cooperative Union," in Nelson A. Dunning, ed., *The Farmers' Alliance History and Agricultural Digest* (Washington, D. C., 1891), 288–292.

[12] *Appletons' Annual Cyclopaedia*, 1890, 301 (New York, 1891); Hicks, *The Populist Revolt*, 114–115; and Dunning, *The Farmers' Alliance . . .*, 290.

[13] John D. Hicks, "The Farmers' Alliance in North Carolina," *North Carolina Historical Review*, 2:182 (1925); and William DuBose Sheldon, *Populism in the Old Dominion* (Princeton, 1935), 35–36.

[14] Dunning, *The Farmers' Alliance . . .*, 290.

[15] *National Economist* (Washington, D. C.), Jan. 3, 1891. This was the official newspaper of the Southern Alliance.

[16] *Ibid.*, Jan. 10, 31, 1891.

[17] Dunning, *The Farmers' Alliance . . .*, 290.

Press" carried quotations from the *National Alliance*.[18]

Apparently the Colored Alliance leaders did not rely solely upon their newspaper to serve as an educational medium for their members. According to Superintendent Humphrey the Alliance members also tried to improve the educational system of their communities. He asserted: "Thousands of their public free schools have been wonderfully improved in character of teaching, and the duration of their sessions much extended by the combining of the people, and the payment by each member of the Alliance of a small sum in the form of tuition. Very many Alliance academies and high schools have been opened in various sections of the country."[19]

There has been no satisfactory study to date of the educational activities of any of the Alliances, and it may well be that further investigation of the educational efforts of the Colored Alliance will throw some light on the neglected topic of adult education in the rural areas during 1880–1890.

Existing as it did mainly in the regions covered by the Southern Alliance, it was natural for the leadership of the Colored Alliance to seek close ties with that organization. The friendly relations between the two groups were so marked that at least one author has referred to the Colored Alliance as an "appendage" of the Southern Alliance.[20] In view of several striking instances of disagreement between the two groups, the term "appendage" would appear to be an imperfect appraisal of the true relationship that existed.

The issue of the much disputed Force Bill sponsored by Senator Henry Cabot Lodge was one of the chief causes of disagreement since the Colored Alliance backed the proposed law in a resolution passed at their 1890 convention,[21] whereas the Southern Alliance was strongly opposed to the measure. On Janaury 10, 1891, the *National Economist* condemned the bill, and the next week it ran an editorial captioned "Better Than the Lodge Bill" which included the following comment:

"We recommend and urge that equal facilities, educational, commercial and political, be demanded for colored and white Alliance men alike, competency considered, and that a free ballot and a fair count be insisted upon and had for colored and white alike, by every Alliance man in America."

That is what the Supreme Council said by a unanimous vote at Ocala, and it is a much more efficient way of securing fair elections in the cities and in the South than is the Lodge bill. . . .[22]

The controversy regarding this issue was carried over into subsequent numbers of the paper, and in March 1891, there appeared a letter written by the Reverend J. L. Moore to a Jacksonville, Florida, newspaper which had chided the Colored Alliance for supporting the Force Bill. Moore was superintendant of the Putnam County, Florida, Colored Alliance and had been a delegate to the 1890 convention at Ocala where he served on the fusion committee meeting with the Southern Alliance. In his 3½-column letter Moore put forth a spirited defense of his organization and also used the occasion to warn against those opportunistic politicians who entered the Alliances for personal gain and subverted its real purposes.[23]

A further example of the aggressive and independent nature of the Colored Alliance was demonstrated in the factional dispute that raged in Mississippi where the State Southern Alliance paper and W. S. McAllister, their State lecturer, disavowed parts of the Alliance program. The Colored Alliance agent for Mississippi, Joseph H. Powell, sent a letter to the *National Economist* which took McAllister severely to task and particularly condemned his endorsement of Senator George, whom Powell accused of supporting disfranchisement of Alliance men.[24] In the battle between McAllister and Burkett for the leadership of the State Alliance, the Colored Alliance supported Burkett who had previously shown his sympathy for the Negro people by voting against their disfranchisement at the 1890 State constitutional convention. Burkett emerged the victor of the battle and went on to become the leader of the Populists in the State.[25]

Still another outstanding example of disagreement was the proposed general strike of cotton pickers projected by the Colored Alliance in 1891. The Southern Alliance was opposed to such action and denounced it in the *National Economist*.[26]

[18] See the *National Economist*, Oct. 11, Nov. 1, Dec. 20, 1890, Jan. 31, and Aug. 22, 1891.

[19] Dunning, *The Farmers' Alliance . . .*, 290–291.

[20] Alex M. Arnett, *The Populist Movement in Georgia* (New York, 1922), 83, 124–125, 132, 153.

[21] *Appletons' Annual Cyclopaedia*, 1891, 300.

[22] *National Economist*, Jan. 17, 1891.

[23] *Ibid.*, Mar. 7, 1891.

[24] *Ibid.*, Apr. 11, 1891.

[25] For Burkett's leadership of the Mississippi Populists, see William David McCain, The Populist Party in Mississippi, unpublished master's thesis, dated 1931, University of Mississippi.

[26] *National Economist*, Sept. 26, 1891.

Though the strike apparently never took place the entire incident is highly indicative of the independent character of the Negro group.

Though the activities of the Colored Alliance afforded sufficient instances of diasagreement with the Southern Alliance to refute any reference to it as an appendage, there is no denying the close bond between the two organizations. The documents relating to the Ocala conventions of the two Alliances are illustrative of the enlightened stand taken by the Southern Alliance regarding cooperation with Negro farmers.

The two conventions were in concurrent session in December 1890, and the Colored Alliance dispatched a message of greeting to the Southern Alliance under the signatures of Secretary H. J. Spencer of Texas, W. A. Patillo of North Carolina, L. D. Laurent of Louisiana, J. S. Jackson, J. H. Nichols, John D. Norris, and James C. Sanders.[27]

On the second day of the Southern Alliance convention, a motion by Alonzo Wardell, a national leader of that group, was carried: "That a committee of five from this body be appointed to wait upon them [the Colored Alliance] with our cordial fraternal greeting, and extend to them our earnest invitation to join us in such action as shall tend to unite our strength in forwarding the cause we love so well."[28]

The resolution was unanimously adopted, and Wardell headed a committee which met with the Colored Alliance. On the fifth day of the convention this committee reported: " . . . we visited the Colored Farmers' National Alliance and Co-operative Union committee, and were received with the utmost cordiality, and after careful consultation it was mutually and unanimously agreed to unite our orders upon the basis adopted December 5, 1890 . . . to adopt the St. Louis platform as a common basis. . . . "[29]

The report then went on to propose joint action to elect sympathetic legislators, recommended equal educational and political rights, and suggested the coordination of district work. For all practical purposes the two groups may be considered to have fused at this time though each maintained its individual organizational structure.

[27] *Ibid.*, Dec. 20, 1890.

[28] Dunning, *The Farmers' Alliance . . .*, 153.

[29] *Ibid.*, 162–163. This "basis adopted December 5, 1890" was the platform which had united the Southern Alliance and the Farmers' Mutual Benefit Association in 1890. Its key plank appears to have been support of the subtreasury plan.

The tolerant racial stand of the Southern Alliance was reflected in the sympathetic treatment of news regarding race relations and the Colored Alliance in the pages of the *National Economist*. News of this type occurred with sufficient frequency to warrant the belief that the interest of the paper in the problems of the Negro farmer was more than transient in nature. To cite but a few instances of this interest there was the report of the convention of the Texas Colored Alliance which gave the highlights of National Secretary H. J. Spencer's speech to that body.[30] On another occasion the paper reprinted the complete 4½-column text of Superintendent Humphrey's address to the national convention of the Colored Alliance.[31] A later issue printed a communication from Humphrey concerning the growth and program of his group.[32] The publication already noted of Moore's letter in the *Economist* is a striking affirmation of the independent character of some sections of Negro leadership in this period.

The enlightened viewpoint of the editors of the *Economist* was apparently reflected elsewhere for the column "Reform Press" which carried excerpts from labor and Alliance papers printed this quotation from the *Advocate* of Kansas: " 'The Alliance third-party movement will also settle the race question of the South, and black and white will vote together for the common interest of all.' "[33] The *Economist* also printed the appeal on October 3, 1891 by a third party conference held at Alexandria, Louisiana, to the voters of the State. It said in part:

> To the voters of the State of Louisiana irrespective of class, color, or past political affiliation
>
> . . . Both of you, white and colored, know that the Republican party has degenerated into a machine controlled by the money kings. . . .
>
> And you Democrats, . . . can you disguise from yourselves that this much vaunted democracy has degenerated into a name to conjure by?. . . .
>
> The specter of negro supremacy has been used to keep you in the toils of scheming machine politicians .[34]

The growing awareness of the Alliance movement to the need for cooperation was apparently reflected in closer ties between local Negro and

[30] *National Economist*, Nov. 1, 1890.

[31] *Ibid.*, Dec. 20, 1890.

[32] *Ibid.*, Jan. 31, 1891.

[33] *Ibid.*, Feb. 21, 1891.

[34] *Ibid.*, Oct. 17, 1891.

white Alliance groups. An excerpt from the Colored Alliance paper, the *National Alliance*, reported:

> We have noticed from many of the white Alliance lecturers and leaders that the Colored Alliance members will be welcomed at the camp meetings. . . . We therefore rejoice at the invitations extended our members to attend the white people's meetings and hear them. We beg you to attend. It will do you good.[35]

If the Alliance movement had restricted its preachments of a more liberal racial adjustment to the columns of its press it might justifiably be dismissed as having only minor significance (that is, if one can assume that such a policy could ever be divorced from practical application). However, this fresh approach to the racial issue was dramatically and effectively highlighted at the conventions called by the Alliances and other sympathetic groups during 1890–92, and we must conclude that the Southern Alliance practised what it preached.

At the conclusion of the Ocala meetings of the Alliances in December 1890, a call was issued for a convention to be held in Cincinnati on February 20, 1891 to discuss the issue of a third party. The convention date was later shifted to May 19, 1891, and the organizations invited included the Northern Alliance, the Southern Alliance, the Colored Alliance, the Knights of Labor, the Farmers' Mutual Benefit Association, and the Union Labor Party. The 1,400 delegates listened to various speakers, including Terence V. Powderly, who urged justice and equal rights for Negro and white. When some of the Southern white delegates attempted to segregate Colored Alliance delegates, the convention defeated them by an overwhelming vote.[36] A highlight of the convention was the symbolistic burying of sectional and racial feeling by having a Confederate and a Union veteran clasp hands on the stage with a colored delegate from Texas standing in the background.[37]

All the Negro delegates to this convention, with the exception of E. A. Richardson of the Georgia Colored Alliance, backed the proposal for a third party.[38] This interest of the Negro agrarian in independent political action is not surprising in view of the results of the 1890 election in Georgia where voters of McIntosh County sent Lecturer Crawford, a Colored Alliance man, to the State assembly.[39]

Additional evidence of the integration of Negroes in the Alliance movement and their part in the laying of the groundwork for the People's Party movement may be seen in the Saint Louis convention of February 1892. This convention had been called following a conference of the Alliances and sympathetic groups in Washington,D. C., in January 1891. In the allotment of delegates to the Saint Louis convention a total of 97 was set aside for the Colored Alliance. Apparently, however, only a fraction of this number was actually sent by the Colored Alliance. Among those designated as delegates were the Reverend J. L. Moore of Florida, W. A. Patillo of North Carolina, E. A. Richardson of Georgia, J. F. Wassengton of Alabama, J. W. Carter of Georgia, H. D. Cassdall of Missouri, L. D. Larned of Louisiana, W. H. Warwick of Virginia, E. C. Cabel of Kansas and Virginia, and L. D. Laurent of Louisiana.[40]

Some of these men had an active career of participation in politics and Alliance work. Patillo had been a Republican candidate for register of deeds in Oxford County, North Carolina, in 1884.[41] He apparently entered the Alliance movement soon after for he was a delegate to the Ocala convention where his name appeared on the resolution of greeting sent to the Southern Alliance convention.[42] Laurent had also been active for some time and had represented Louisiana at the Ocala meeting where he, too, signed the previously mentioned resolution.

Though few in numbers the Negro delegation was a spirited group, and they apparently participated actively in the deliberations and decisions of the convention. At the start of the meeting, the name of William Warwick of the Virginia Colored Alliance was advanced for the post of assistant secretary. A white delegate from Georgia moved to make this proposal unanimous and told the con-

[35] *Ibid.*, Aug. 22, 1891.

[36] Helen M. Blackburn, The Populist Party in the South, 1890–1898 (unpublished master's thesis, dated 1941, Howard University, Washington, D. C.), 8, 16–17.

[37] Sheldon, *Populism in the Old Dominion*, 66.

[38] Blackburn, The Populist Party in the South, 10.

[39] James C. Bonner, "The Alliance Legislature of 1890," in James C. Bonner and Lucien E. Roberts, eds., *Studies in Georgia History and Government* (Athens, 1940), 163.

[40] Jamie Lawson Reddick, The Negro and the Populist Movement in Georgia (unpublished master's thesis, dated June 1937, Atlanta University), 35; and *National Economist*, Mar. 5, 1892.

[41] William Alexander Mabry, *The Negro in North Carolina Politics Since Reconstruction* (Durham, N. C., 1940), 28.

[42] *National Economist*, Dec. 20, 1890.

vention, "we can stand that down in Georgia." When an Alabama delegate objected, the motion was put to a vote and "only one 'no' was heard in the whole House." During the meeting a get-together of the Blue and the Gray was held, and the official minutes record that at the height of the reunion "E. C. Cabel, a negro, was brought forward on the platform, and shook hands, laughing, with everybody sitting in front."[43]

A serious condition involving the independence of the Negro delegation arose when the Negro group at the meeting discovered that Superintendent Humphrey was permitting some of the ballots of the Georgia Colored Alliance to be cast by white Georgians in favor of a third party. The Colored Alliance men from Georgia reacted strongly against this improper act and are supposed to have withdrawn from the meeting as a gesture of protest.[44] It is possible that they were partially influenced in this act by the opposition of E. A. Richardson of the Georgia Colored Alliance to any third party moves. In any event it is clear that the withdrawal did not affect all the Negro delegates for the name of L. D. Laurent appeared on the call that was issued at the termination of the Saint Louis meeting for the People's Party convention at Omaha.[45]

With the founding of the People's Party the strivings of the Negro people for economic and political advancement moved into an even more pronounced type of activity. As the Negro in the Populist movement will be considered separately in the near future,[46] it is suffice to state here that historians have been singularly remiss in evaluating the contribution of the Negro to the People's Party.

Meantime, what of the Colored Alliance? What led to its collapse? To what degree was it absorbed into the Populist movement? Unfortunately, these questions must remain unanswered until the official records of the organization are located and studied. A clue to the problem may be the reference to the failure of members to pay dues that appeared in a letter in the *National Economist*. After 1891 there are no further references to the *National Alliance* in the "Reform Press" section of the *National Economist*, and it seems reasonable that the paper and the organization itself collapsed about this time.

Whatever the factors that led to the breakup of the Colored Alliance, the contributions of that group merit the serious attention of interpreters of the American scene. As the story of the entire Alliance movement unfolds it presents a serious challenge to the generally accepted theory that the "re-establishment" of white dominance in the South has never been seriously contested since 1876. It is certainly interesting to note that the one great mass movement of the South which grew out of the hopes and aspirations of the common people of that region strove manfully to adjust to a liberal and decent code of race relations,[47] a code which recognized the Negro as a fellow toiler worthy of equal treatment in the political and economic spheres and a more equitable treatment in the realm of Southern social life. "Equal rights for all and special privileges for none" was inscribed on the banners of the Alliance, and in trying to live up to the meaning of their motto the Alliance men wrote a bright page in the history of the South. Their efforts to find a path to a new relationship between the races are a worthy part of the American tradition and are not the least of their accomplishments.

[43] *Ibid.*, Mar. 5, 1892.

[44] Blackburn, The Populist Party in the South, 22–23, where the account of the episode is based largely on unfriendly newspaper sources.

[45] *National Economist*, Mar. 5, 1892.

[46] For a cursory treatment, see Jack Abramowitz, "Agrarian Reformers and the Negro Question," *Negro History Bulletin*, 11:138 (March 1947).

[47] The Southern Alliance did not always live up to this high standard. Anti-Negro and anti-Semitic overtones were occasionally evidenced, but even here the action was defensive in nature. For example, in the *National Economist*, Sept. 17, 1892, the editors, stung by the pro-Negro accusations levelled against them by Democrats, took President Cleveland to task for appointing Frederick Douglass and other Negroes to public office and further reproached the President for inviting Douglass and his white wife to the wedding reception at the White House. At the conclusion of the article the editors significantly noted that they were personally opposed to raising issues of this type and did so only upon repeated requests of others. Whether this is true or not, it is quite an event when Southern editors feel constrained to apologize for engaging in anti-Negro writings.

# AGRICULTURE IN THE *ENCYCLOPÉDIE*

## An Essay in French Intellectual History

DAVID J. BRANDENBURG

*Department of History, The American University, Washington, D. C.*

There is general agreement that the term "agricultural revolution" is a dubious one when used to denote widespread actual or physical changes in English and Continental methods of farming in the eighteenth century.[1] Pressed on the subject, however, the devotee of the word "revolution" can retreat with some grace by claiming that there was, nevertheless, a revolution in agricultural *thought*, as shown by the advanced ideas of Jethro Tull, Charles Townshend, Arthur Young, and others in England. French scholars, notably the late Marc Bloch, have found the same ideas in France of the Enlightenment and have drawn the same conclusions, which, however, may well be contested on the basis of an examination of French ideas about agriculture.

Because of its repute as one of the fundamental documents in mid and late eighteenth-century French intellectual history, the great *Encyclopédie* is perhaps the first source to examine in an attempt to determine enlightened French ideas on any subject.[2] The general "climate of opinion" and the price movements of the times indicate that there might be considerable attention to agriculture in this famous but neglected source.

It is not surprising that the reforming spirit of eighteenth-century intellectuals, specifically the *philosophes*, applied itself rather intensively to agricultural subjects. This was the era of the "practical" and useful, when men turned from the contemplation of eternals to the immediate problems of the everyday world. Good works were thought of as useful works, and useful works were reforming works which had as their object the amelioration of man's relation to his immediate environment. Because the average Frenchman of the eighteenth century still made his living by the plow, one very important aspect of this relationship—an obviously inharmonious one—was agriculture. Voltaire remarked the new orientation:

> Toward the end of the year 1750, the French nation, surfeited with tragedies, comedies, operas, romances, and romantic histories—with moral reflections still more romantic, and with theological disputes on grace and on convulsionaries—began to reason upon corn. They forgot even the vine, in treating of wheat and rye. Useful things were written on agriculture, and everybody read them except the laborers.[3]

There were, moreover, economic, as well as romantic, reasons for this upsurge of interest in matters agricultural. All over Europe in the eighteenth century prices were rising. In France this incremental movement was especially marked with regard to agricultural commodities.[4] Since the period of greatest French reform activity in agriculture (1750–1789) and the publication of the *Encyclopédie* and its various supplements (1751–1780) coincide roughly with the period of greatest price rise (1763–1789) before the Revolution, it is perhaps meaningful to place this discussion against a background of rising prices for agricultural products.

Price rises of this nature were inevitably felt keenly by the nobles, many of whom derived their income from fixed money rents and who comprised more nearly a consuming than a producing class.

[1] See Earle D. Ross and Robert L. Tontz, "The Term 'Agricultural Revolution' as Used by Economic Historians," *Agricultural History*, 22:32–38 (1948).

[2] *Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers, par une société de gens de lettres. Mis en ordre et publié par M. Diderot . . . et quant à la partie mathématique par M. d'Alembert . . .* (17 vols., Paris, 1751–1765).

[3] François Arouet de Voltaire, *Dictionnaire philosophique* (Paris, 1816), 3:91 (under *Bled ou Blé*). Translation by D. J. B.

[4] See C.-E. Labrousse, *Esquisse du mouvement des prix et des revenus en France au xviii^e siècle* (Paris, 1932), esp. 38. This book along with the same author's more recent *La Crise de l'économie française à la fin de l'ancien régime et au début de la Révolution* (Paris, 1942) are among the most valuable works on the prerevolutionary French economy. The latter volume is concerned with viticulture and the wine industry; a projected continuation will deal with grain.

It is entirely possible that some of the more enterprising nobles, along with those bourgeois who had purchased landed estates or who contemplated such investments, were tempted to make the rising prices accrue to their benefit as producers rather than to their loss as consumers. One way to effect such an end was to enter personally into the business of agricultural production, like "Turnip" Townshend in England, and so inaugurate cost-cutting reforms.

To effect such reforms necessitated special agricultural knowledge, and after a farmer-noble or bourgeois had examined the standard authorities such as Varro, Cato, Columella, and Jethro Tull, where more logically should he turn for information than to the up-to-date and currently appearing *Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers*? The French had great respect for the authority of the Romans, but they were prone, on occasion, to doubt the utility of some of Vergil's agricultural implements. The *agronomes* were attentive to and envious of the success of the English innovators, but not all of them, as shall be seen, were convinced that the Tullian husbandry, for instance, was entirely sound or even that all successful English methods could be transferred to France. The *Encyclopédie*, on the other hand, was being written by Frenchmen who should understand French agricultural problems. It would seem, then, that a study of the articles on agriculture in the great *Encyclopédie* should provide a general picture of the French rural scene and show how Frenchmen sought to improve their environment and to meet rising prices.

More precisely, this article is intended as a study in the intellectual history of French agriculture with special attention to technical innovations. What can we discover from this eclectic, alphabetical compendium, the *Encyclopédie*, about the direction of the French agricultural movement in the last half of the eighteenth century? Effectively to study something as vague as a "direction," one needs to define rather carefully what aspects of that direction are under consideration. In the present writer's opinion,[5] the crucial technical developments of the so-called "agricultural revolution" are as follows: the use of crop rotations as opposed to fallows; the introduction of grass husbandry and of horse hoeing; the experiments with new crops such as turnips and with new machinery such as drills; and, finally, changes in animal husbandry with a concomitant reemphasis on fertilization. In company with certain social or agrarian changes these technical agricultural factors form the "new husbandry" of the eighteenth century or, as the French put it, agriculture *en grand*.

By examining French agricultural thought on these specific matters, one should be able to accept or reject with some authority the standard concept that French landlords and *agronomes* wished to duplicate in France the English "agricultural revolution" and that they failed by reason of the operation of forces beyond their control. Is it correct, as the late Marc Bloch maintained, that in eighteenth-century France there was a widespread attempt to transform the techniques and rules of agricultural exploitation?[6] On the basis of the articles on agriculture in the *Encyclopédie* we should be able to judge whether the *agronomes*, as Bloch suggested, described the old routines in order to attack them or whether they were essentially conservative, attempting not to bring about a revolution but to effect reforms *within* the general rural structure.

The *Encyclopédie* originated in the mind of an unscrupulous Parisian publisher named Le Breton who employed the *philosophes*, Diderot and d'Alembert, as editors of the work. The first volume came off the press in July 1751, and by November 1757, the first 7 folio volumes had appeared. For the next 8 years the enterprise lay under a cloud of censorship—which did not, however, prevent the clandestine production of the last 10 volumes of the original set, though it did prevent their distribution. In 1765 the cloud blew away, and the last 10 volumes appeared simultaneously. Eleven folio volumes of plates were published during 1762–1772,[7] a 5-volume supplement during 1766–1777 (including a volume of plates),[8] and, finally, a 2-volume analytical table

[5] Marc Bloch gave his breakdown of the "agricultural revolution" in *Les Caractères originaux de l'histoire rurale française* (Cambridge, Mass., 1931), 201–202; Lord Ernle's appears in *English Farming, Past and Present* (New York, 1922), 149.

[6] Bloch, *Les Caractères originaux de l'histoire rurale française*, x-xi.

[7] *Recueil de planches, sur les sciences, les arts liberaux, et les arts méchaniques, avec leur explication* (11 vols., Paris, 1762–1772).

[8] *Supplément à l'encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers, par une société de gens de lettres. Mis en ordre et publié par M**** (5 vols., 1776–1777).

in 1780,[9] making 35 volumes in all. According to one authority (who perhaps counted them!) there are approximately 60,660 articles in the original 17 volumes.[10] Figuring, then, on roughly 3,570 articles per volume we may estimate that with the later additions there are about 71,370 articles in all. Of these the present writer has read about a hundred, in length from a few lines to 40 columns, chosen for their pertinence to the specific technical agricultural subjects mentioned above.

Largely because of barbarous bowdlerizing of volumes 8 through 17 by the publishers, Diderot disassociated himself from the project in 1765, and some scholars feel that without Diderot the 5 volumes of the *Supplément* are not genuinely part of the *Encyclopédie*, so closely was this one man bound up with the enterprise. Not a farmer or craftsman, but a man of tremendous curiosity, Diderot wrote, edited, or composed by far the largest number of articles on the trades and the useful arts, leaving much of the more purely theoretical work to d'Alembert and others. In the "Discours preliminaire," d'Alembert said: "He [Diderot] is author of the most extended portion of the *Encyclopédie*, the most important, the most desired by the public, and I dare say, the most difficult to fulfill, namely the description of the Arts."[11]

For his material Diderot used memoirs supplied by workmen and by amateurs, or gathered the information himself by visiting workshops, manufacturies, and farms. He can thus be trusted as a reporter if not as a farmer. Moreover, he seems to have made a real effort to listen to the best advice. For example, Duhamel du Monceau, whom he often quoted, was perhaps the dean of the French *agronomes* of the period. Diderot was responsible for several long articles on agricultural subjects (*Agriculture*, 14 columns; *Boeuf*, 5 columns; *Charrue* [plow], 3 columns); and a host of shorter articles such as *Faulx* (scythe), *Le sarrasin* (buckwheat), and *Binage* (second plowing).

Sometimes, however, one senses that Diderot respected tradition and the opinion of the humble practitioner as much as he did that of the exalted scientist. In his article on oxen, it would seem that the information might have come from either a classical authority or a drover whom Diderot met by the wayside: "Black oxen are reliable; red ones are the best; white ones work slowly; never trust a spotted ox; grey ones aren't worth much; brown oxen have little endurance." The rest of the article on oxen has the ring of good, practical information on castration (at 2 years), training, feeding, fattening for the butcher (should be done when the ox attains the age of 6 years).[12]

Besides the editor, contributors on agricultural subjects ranged from professors of medicine, doctors, and naturalists to physiocratic economists. Of the physiocrats, François Quesnay and Veron de Forbonnais are examples, Quesnay having been responsible for the articles on *Fermier* (25 columns) and *Grain* (40 columns); and de Forbonnais for *Culture* (30 columns). Le Roy, lieutenant of the hunt at the park of Versailles, an authority on falconry and author of several articles dealing with manure and fertilizer, also seems to fall into the physiocratic group. These men inflexibly follow the physiocratic line, emphasizing the dignity of agriculture, large-scale methods of production, and free trade and fiscal reform. They are as doctrinaire as only enthusiasts can be, and it is probable that they were only incidentally interested in the actual techniques of farming. That they represented the main body of enlightened French opinion regarding agriculture is open to considerable doubt. Two of the most exalted eighteenth-century French *agronomes*, on the contrary, the duc de La Rochefoucauld-Liancourt and the marquis de Turbilly, seem to have placed their hopes for better farming in the small peasant-proprietor rather than in the wealthy, large-scale gentleman-farmer.[13]

[9] *Table analytique et raisonné des matières contenue dans les xxxiii volumes in-folio du dictionnaire des sciences, des arts et des métiers, et dans son supplément* (2 vols., Paris, 1780).

[10] Nelly N. Schargo, *History in the Encycloépdie* (New York, 1947), 17.

[11] *Encyclopédie*, 1:xliii. Even with a capital "A" the word art meant more to men of the Enlightenment than it does today with a small "a." The inclusion of both "arts" and "trades" in the title of the *Encyclopédie* is almost a redundancy. See Pendfield Roberts, *Quest for Security* (New York, 1947), 176.

[12] *Encyclopédie*, vol. 2, under *Boeuf*, p. 291 b. Hereafter an abbreviated form is used for references to articles in the *Encyclopédie*: first the title of article, then the volume and page. The letter "a" after the page number indicates the first column on the page; "b" the second column. In this form the reference above would appear as follows: *Boeuf*, 2:291 b. In references to the *Supplément*, the word *Supplément* will be placed before the volume number. I am indebted to Miss Schargo for this technique.

[13] For Liancourt, see Armand Prosper Faugère, *Vie et bienfaits de La Rochefoucauld-Liancourt* (Paris, 1835),

Louis, le chevalier de Jaucourt, one of the more considerable *philosophes* as well as one of the principal contributors to the *Encyclopédie*, composed many agricultural articles, among them *Herbes mauvaises*, *Maïs*, *Sainfoin*, *Soc*, and *Semer*. Another important contributor of agricultural articles was a naturalist and art historian, Antoine-Joseph Dezallier d'Argenville, author of a well-known eighteenth-century book on gardening, *Traité sur la théorie et la pratique du jardinage*, who was responsible for such articles as *Columbine* (pigeon manure), *Cultiver*, and *Labour*. Perhaps the most distinguished contributor was Louis-Jean-Marie Daubenton, doctor and naturalist, friend of and collaborator with Buffon. Daubenton became professor of rural economy in the veterinary school at Alfort in 1783 and used part of his fortune and many years of his life to develop in France a breed of fine-wooled sheep comparable to the Spanish Merinos.[14]

Outstanding by their absence from the list of contributors are such important agricultural propagandists as the abbé Rozier, editor of the monumental *Cours complet d'agriculture*,[15] which was designed to compensate for what many regarded as insufficient attention to agricultural matters in the *Encyclopédie*, and Antoine-Augustin Parmentier, popularizer of the potato. Also missing are such scientific agriculturists as Antoine-Laurent Lavoisier and Pierre-Marie Broussonet and such noble reformers as the duc de La Rochefoucauld-Liancourt and the marquis de Turbilly.

In general, however, we may conclude that the authorities represented in the *Encyclopédie* are a good cross section of enlightened eighteenth-century agricultural opinion with some physiocrats (Quesnay, Forbonnais, Le Roy), some scientists (Argenville, de Jaucourt, Daubenton), and one highly enlightened amateur (Diderot). In this regard it should be pointed out that the eighteenth-century French *agronomes* were a remarkably homogeneous group, pirating freely from each other's works and forming a genuine mutual admiration society. It should also be kept in mind that the variety of opinion in the *Encyclopédie* makes it almost self-evaluating as a source.

*The Question of Rotations.* The introduction of intensive crop rotation was of prime importance in the English agricultural revolution. In most regions of France intensive culture was unknown, and the fallow system was used almost exclusively. In parts of Brittany the soil was left idle two out of every three years, and certain "cold" lands were cultivated only once every seven or eight or even twenty years.[16] In Picardy and Artois, comparatively advanced agricultural areas, the usual rotation has been described as follows: first year, wheat, rye, oats, *meteil* (a mixture of wheat and rye), or winter barley; second year, spring grains; third year, fallow.[17] Broussonet told Arthur Young, who called him "the only practical farmer in the Paris Society of Agriculture," that he sowed white corn (wheat) two, three, or four times in succession. When Young suggested turnips and cabbages for breaking this order, the other agriculturists in the company showed themselves almost unanimously opposed.[18]

The attitude of the Encyclopedists to this prevalence of fallow husbandry, while far from decisive, was generally opposed to any radical change. Even Le Roy, a physiocratic contributor, seems to have harbored real doubts about the efficacy of rotations, admitting an inability to decide whether or not different plants exhausted different substances from the soil. Although he conceded that plants such as lucerne, sainfoin, and trefoil, which draw their nourishment from a considerable depth, served to rest and to fertilize soil worn out from carrying grain, he urged caution in plowing under these plants because "their vigor is such that they might burn a crop of wheat." On land where lucerne, sainfoin, or trefoil had been plowed under, he recommended two plantings of oats before turning it over to wheat.[19]

More than cautious on the subject of intensive rotations, Diderot himself was committed dogmatically to the fallow: "The year of rest is on the

14–15; and Ferdinand Dreyfus, *Un Philanthrop d'autrefois: La Rochefoucauld-Liancourt* (Paris, 1903), 33. For Turbilly, see Henri Baudrillart, *Gentilshommes ruraux de la France* (Paris, 1893), 27.

[14] Extract from the *Procès-verbal de la séance de la Convention Nationale, du 1er nivôse, an 3*, quoted in Louis-Jean-Marie Daubenton, *Instructions pour les bergers et les propriétaires des troupeaux* (ed. 3, Paris, 1802), xxix.

[15] François Rozier, *et al.*, *Cours complet d'agriculture* (8 vols., Paris, 1781–1789).

[16] Henri Sée, *Esquisse d'une histoire du régime agraire en Europe aux xviii^e^ et xix^e^ siècles* (Paris, 1921), 38.

[17] Alberic de Calonne d'Avesne, *La Vie agricole sous l'ancien régime dans le nord de la France* (Paris, 1885), 77.

[18] Arthur Young, *Travels in France During the Years 1787, 1788, 1789* (London, 1924), 167.

[19] *Engrais*, 5:686 b.

whole a prerequisite for a harvest of wheat." Referring contemptuously to the *speculateurs en agriculture* who argued for and against the fallow, he held that the scarcity of fertilizer made it difficult to do without the sabbath for the soil.[20] In his capacity as editor, Diderot gleaned this opinion from memoirs submitted to him by "experts" and probably, therefore, represents a rather widespread opinion. The present writer has not found any favorable discussion of rotations in the original 17 volumes of the *Encyclopédie*. The farmer was invariably advised to hold to the old ways, to divide his domain into three portions, to sow one part in wheat, the other in oats, and to leave the third fallow.[21] The farmer was reminded, moreover, that, unless he owned his land in freehold,[22] he was forbidden by law and by custom to make any change in the traditional pattern.[23]

Not until the third volume of the *Supplément*, which appeared in 1767, does one find an outright condemnation of the "opprobrium of the fallow." Maintaining a strictly Tullian line, the anonymous author of the article on *Jachère* held that the only necessities for plant growth are heat and moisture, that organic matter in the soil is detrimental to succeeding crops, and concluded that when one sows different types of plants alternately it is folly to let the soil rest. He called for abolition of all laws which provided for fallow and suppression of all customs which hindered individualism as regards rotations.[24]

In the same volume of the *Supplément*, on the other hand, appears an article on *Institutions d'agriculture* which presents a short survey of agricultural organizations, first in England, then in Florence and finally in France, where the first *Société d'agriculture* was formed in Brittany in 1757. The author, Beguillet, acknowledged that the French societies performed a real service but lamented that there was as yet no school or educational institution for the study of agriculture.

All this was by way of introduction to the announcement that a school of agriculture was about to be established by "a zealous citizen," Sarcey de Sutières, who would assure the best culture of the soil by giving the most advanced and up-to-date information to those who actually farmed. This project had received the approval of the king and the support of a man of good will who had supplied the land and the necessary tools. The curriculum, which is carefully set forth, would emphasize such matters as multiple plowings, preparing seed for planting with a special solution, and using a harrow instead of a plow for covering seed. There is no mention of rotations.[25] In fact, the emphasis on multiple plowings indicates that each field would, under this regime, remain fallow for one year in three.

*The Question of Horse Hoeing.* Like Jethro Tull and Lord Townshend in England, the eighteenth-century French agriculturists thought a good deal about how to cultivate the soil in order to enrich it and to increase its yields. Sometimes adapted from the more advanced English techniques, French developments, as reflected in the *Encyclopédie*, were, however, less intensive in character.

One of the first processes in the agricultural cycle, that of selecting and caring for seed, received special attention. Almost every writer on agriculture had his formula for a "fructifying liquor" in which to steep seed previous to planting in order to prevent the later development of smuts and blights.[26] Despite the fact that such treatment was by no means a novelty,[27] the Encyclopedists devoted considerable attention to the problem, most of the contributors favoring the usual mixtures of lime and water.[28] Under *Germination* in the third

[20] *Jachère*, 8:429 b.

[21] *Agriculture*, 1:185 a.

[22] Freehold ownership on the part of the *laboureur* was extremely rare. Peasant proprietorship was a prescriptive, an economic, and, indeed, a form of legal ownership; but it was not freehold. There is a tremendous literature on this subject. See Sée, *Esquisse du régime agraire;* and Jean Loutchisky, *La Propriété paysanne en France à la veille de la Révolution* (Paris, 1912). Maxime Kovalewsky, *La France économique et sociale à la veille de la Révolution* (Paris, 1911), offers a contrary interpretation. See also Marcel Marion, *Dictionnaire des institutions de la France aux xvii^e^ et xviii^e^ siècles* (Paris, 1923), under *Laboureur*.

[23] *Dessoler les terres*, 4:894 b.

[24] *Jachère, Supplément*, 3:490 a-b.

[25] *Institution d'agriculture, Supplément*, 3:612 a.

[26] For a survey of this subject from the classical writers to the advent of modern scientific practices, see F. A. Buttress and R. W. G. Dennis, "The Early History of Cereal Seed Treatment in England," *Agricultural History*, 21:93–103 (April 1947).

[27] According to a modern authority, the peasants in Picardy and Artois customarily treated seed to prevent the subsequent development of smut or brown rust. Calonne d'Avesne, *La Vie agricole sous l'ancien régime*, 91.

[28] *Echauler*, 5:244 b; *Chotté, Supplément*, 2:408 a; *Froment*, 7:335 a–b.

volume of the *Supplément* there appears an extended discussion of the relative merits of various mixtures for treating seed and whether or not it should be treated at all. Sarcey de Sutières, who established the school mentioned above, was reported to have been enthusiastically in favor of treatment.[29] One gentleman went so far as to claim that his liquor made plowing unnecessary, according to Duhamel du Monceau, but on the basis of a controlled experiment this authority concluded that while fructifying liquors probably did no harm they offered no measurable benefit.[30]

As regards preparing the seedbed, the emphasis in the *Encyclopédie* was on repeated plowings. "In the culture of wheat," wrote one author, "there are three main objects: to condition the soil, to fertilize it, and to destroy the infinite number of weeds and insects. The first is done with several plowings [from three to five]; the second with manure; the third by letting the flocks browse on the plants that continually grow in the fields [while fallow]."[31] Similar advice appears again and again, generally demanding three or more plowings: one in the fall, one in the spring, and a third shortly before planting a winter grain.[32] Harrowing was recommended before sowing.

When they considered the subject of sowing, the Encyclopedists became embroiled in the controversial question of horse hoeing, since, as Tull had pointed out decades earlier, row planting is prerequisite to any sort of cultivation during the growing season. Generally speaking, the articles tend to advise that grain be sowed thinly, one third less, in fact, than was commonly planted per arpent, since "thinly sown wheat is less likely to lodge [*verser*]; its straw is stronger; the ears are larger and fuller, and the harvest is more abundant" than when sown thickly.[33] But as regards the Tullian method, for instance, of planting grain crops in rows to enable growing-season cultivation there was serious division. Le Roy, the physiocratic expert on falconry, attacked the idea:

> The new method for cultivating and above all for the culture of wheat has made enough disturbance to be examined here. . . . This method has had fewer partisans and less celebrity in England where it was born than in France where it is only adoptive; it has been supported by the naive activity of M. Duhamel, by his zeal for the public welfare, by a sort of paternal tenderness which blinds him to the faults that are inherent in this method.

Le Roy remained convinced that one should pay more attention to fertilization and less to frequent cultivation; what he considered excessive cultivation would, he thought, merely facilitate the growth of weeds. He offered no opinion on row planting but struck indirectly at horse hoeing by stating that weeds can be removed effectively only by hand.[34] The article on sowing (*Semer*) also conceded that most farmers use too much seed but cautioned that if the sowing is too thin "such an excessive quantity of weeds will grow in the empty spaces that one cannot hope to destroy them all." The author of this article joined in attacking the *outré* theorists who, he felt, based their conclusions on small-scale experiments which offered no valid guide for large-scale plantings. He insisted, finally, on broadcast sowing, which precludes horse hoeing, as the only practical method.[35]

This is not to say that nowhere in the *Encyclopédie* does the system of row planting and horse hoeing find supporters. Diderot, in his capacity as editor, attempted to be nonpartisan, reporting that several different devices for sowing had been invented and describing some of those which "combine easy construction with surety of effects." Without committing himself, Diderot explained that the purpose of these machines was to economize on seed and to obtain more abundant harvests.[36]

Stronger support for row planting and, therefore, indirectly for horse hoeing, appeared in de Jaucourt's article on the culture of sainfoin. Recommending that this grass be planted with oats or barley, he remarked that the sainfoin may be choked out if the annual grain is too closely planted or if it lodges. To avoid this eventuality he suggested the method of Tull, namely planting sainfoin in rows separate from the rows of grain.[37] Again, de Jaucourt, despite the fact that he had attacked the idea of row planting in his article on sowing, plumped for Jethro Tull in the article on weeds. After lamenting at length that weeds

[29] *Germination, Supplément,* 3:216–217.

[30] Duhamel du Monceau, *Elements of Agriculture,* tr. by Philip Miller (London, 1764), 1:229–239.

[31] *Froment,* 7:335 a.

[32] For instance, *Labourage, Supplément,* 3:693 a–b, 694 a.

[33] *Froment,* 7:335 b.

[34] *Froment,* 7:335 b–336 a.

[35] *Semer,* 14:942 a.

[36] *Semoir,* 14:947 a.

[37] *Sainfoin,* 14:518 a.

like the poor, are always with us, he concluded that "the best way known to date of uprooting and destroying weeds in the field is to continue cultivation while the grain is growing, according to the method of M. Tull."[38] In the *Supplément*, which, generally speaking, shows more of an English orientation and a stronger physiocratic bias than the original volumes, horse hoeing was vigorously praised in two articles, *Germination* and *Cultivateur*. Especially is this true of the former in which Beguillet presented the thesis that the size and number of grain stalks increase in direct proportion to the vigor of the roots which, in turn, is stimulated by cultivation during the growing season.[39]

In view of this division of opinion and of at least one case of individual inconsistency, it would appear (if the *Encyclopédie* has any value as a source for French agricultural opinion) that the eighteenth-century *agronome* was far from slavish in his imitation of at least one important aspect of the English agricultural revolution.

*Tools and Machines.* Hippolyte Taine has compared the agricultural implements of the *ancien régime* to those of Vergil's time.[40] Like many of Taine's judgments of the prerevolutionary era, the comparison is somewhat unjust but not so far-fetched as one might suppose. For example, the simplest and crudest of the plows observed by Duhamel du Monceau consisted of "only a crooked piece of wood pointed with iron, having behind a kind of lever to serve as a handle to it." A type in common use in Provence and Languedoc was the *araire* or small plow which was little more than a large wedge. A third type was massive and fatiguing to man and beast alike.[41] At the beginning of the century, Louis Liger, a popular agricultural writer, paid homage to the plow as the great tool of tillage and described a good plow as a two-wheeled machine complete with colter, share, and "ears," which last were intended to turn the soil both to right and left at the same time.[42] Illustrated in the *Encyclopédie* is a device, labeled "ordinary plow"; it is two-wheeled like Liger's plow, equipped with a knife colter and an iron share but no moldboard or "ears" at all.[43]

As opposed to these inferior examples, the plows recommended to the reader through words and pictures in the *Encyclopédie* were all either lighter and less cumbersome or otherwise more effective than those described above. Needless to say, the pictures are more informing than the verbal descriptions. In plowing, the stress seems, as it has in many another age, to have rested on turning the soil completely over.

Diderot defined a plow as the fundamental instrument for cultivating the earth and did not hesitate to state that the standard French plows of his day were considerably superior to their counterparts in classical antiquity. Defining the object of plowing as the destruction of weeds and the reduction of the soil "into molecules," Diderot maintained that a spade or turning fork is the best tool for those functions, if impractical for large-scale farming. He seconded Tull's idea that the plow should be designed to stir the soil more deeply and to break up the clods more thoroughly than was common, but he doubted Tull's claim that a plow could lay a furrow 10, 12, or 14 inches deep.[44]

In the first volume of plates are illustrated four sorts of recommendable plows: a plow of many

[38] *Herbes mauvaises*, 8:148 b–149 a.

[39] *Cultivateur*, *Supplément*, 2:666 a; *Germination*, *Supplément*, 3:211 b.

[40] Hippolyte Adolph Taine, *The Ancient Régime*, tr. by John Durand (New York, 1931), 339.

[41] Duhamel du Monceau, *Elements of Agriculture*, 2:3–4, 8–9.

Legend has it that Jethro Tull received the inspiration for his horse-hoeing husbandry from observing French vinyardists cultivating between the rows of vines, probably with the *araire* plow. See Ernle, *English Farming*, 171. The author of the article *Maïs* in the *Encyclopédie* stated categorically that Tull took his method from the long-standing Anglo-American method of cross-cultivating between rows of Indian corn. *Maïs*, 9:888 b–889 a.

[42] Louis Liger, *La Nouvelle Maison rustique, ou Economic générale de tous les biens de campagne* (Paris, 1778), 1:437. This is a re-edition of a popular farming book first published in 1701.

[43] *Agriculture et economie rustique*: *Recueil de planches I, Labourage*, pl. 1. This reference is to the section on agriculture in the first volume of the plates. There is no page numbering in these volumes; hence the necessity for the form above: first the general topic; then the volume in the *Recueil de planches;* then the subtopic; and finally the plate number within the subtopic. References to the fifth volume of the *Supplément*, which is also a volume of illustrations, will follow the same form except that the volume indication will be *Suite de recueil des planches*. These engraved illustrations are the most fascinating "visual aids" in the history of eighteenth-century agriculture that the present writer has seen.

[44] *Charrue*, 3:216 b–217 a.

colters but no moldboard, attributed to Jethro Tull; a *charrue à versoir* with a single moldboard; a *charrue à tourne oreille* designed to lay a furrow either to the right or left depending upon which of the two "ears" or moldboards was used; and, finally, "a double plow which traces two furrows at once."[45] This last is the most advanced device which the present writer has come across in the literature on the farming of the period. It consisted of two small wheels and a horizontal beam with a wooden arc projecting from one side of the beam; one plow bottom was attached to the beam, and the other to the projecting arc, both with knife colters. These bottoms seem, in the illustration, to be made of iron; the share and moldboard are continuous whereas all other contemporary French plow bottoms were made up of separate components.[46]

One gathers from the *Encyclopédie* that harrows were no novelty in eighteenth-century France. The article on the subject recommended a triangular harrow equipped with iron teeth to be used either before or after sowing, the purpose in the latter case being to cover the seed.[47] In the first plate of engravings dealing with agriculture, the process of preparing the soil is illustrated by a busy rural scene. There is a man plowing with a huge *charrue à versoir* drawn by two horses and a woman operating a one-wheeled device for dropping seed. In the background a man is rolling with a large, horse-drawn, wooden roller while a second is sowing broadcast and a third is covering the seed with a trapezoidal harrow studded with iron teeth.[48]

To prepare the seedbed, then, the Encyclopedists were in substantial agreement that there should be repeated and thorough tillages with a moldboard plow and a subsequent working over with a harrow of one sort or another. There is no such agreement, however, on the subject of tools for planting. Under *Semer* the literate French farmer could read that "nothing is less suitable to even and regular sowing than most of the *semoirs* [literally sowers] that have been devised." Equal distribution would depend upon uniform movement of the machine, upon the supposition that the draft animals would be unimpeded in their progress. A stone in the path of the instrument, or a simple mechanical failure, could render it quite useless. The hand of an experienced man, on the contrary, was the best possible *semoir*; it was "subject to no accidents and in operation it is sure, easy, and expeditious."[49] Notwithstanding this express disapproval, the original volumes of the *Encyclopédie* include two full-page plates devoted to drills, probably after those developed by Duhamel du Monceau.[50]

By the time of the publication of the fourth volume of the *Supplément* (1777), a change in viewpoint had taken place. The author of the article on *Sembrador* was enthusiastic about machine sowing. The *sembrador* was a planting device invented by a Spaniard, le chevalier Lucatello, toward the end of the seventeenth century. Together with a plow to which it was attached, it was intended to till, to drop seed at equal distances in three rows, and to harrow in one operation. The inventor presented the instrument to the Spanish monarch "who tried it out with great success" and gave the inventor a monopoly to sell it for 24 reales in Europe and for 32 reales outside of Europe. Attacking hand sowing as uneven and hazardous, the author of the article strenuously advocated the use of this device or one similar.[51] In this connection, there also appeared in the *Supplément* favorable mention of a horse hoe (*cultivateur*), described as a sort of plow without colter or moldboard.[52]

There seems to have been no concern in late eighteenth-century France with the idea of mechanizing the harvest. There was even doubt about the suitability of improved hand tools for harvesting. Generally speaking, the precious wheat was carefully cut with sickles and grass was mown with scythes. In many communities, the use of scythes for grain harvesting was forbidden on the ground that this tool cut the straw so short that not enough was left in the fields for indigent peasants to glean. There was some inclination to use a cradle on the scythe, but this tool, too, was forbidden in many localities. Diderot was quite explicit that a regular scythe might be used to mow hay or a cradle for oats, thereby implying that for wheat or rye one should employ a sickle.[53] Elsewhere there

[45] *Agriculture et economie rustique: Recueil de planches I, Labourage*, pl. 1, 2, and 3.

[46] *Agriculture et economie rustique: Suite de recueil des planches*, pl. 1; *Charrue, Supplément*, 2: 370 a-b.

[47] *Herse*, 8:185 b–186 a; *Herser*, 8:186a.

[48] *Agriculture et economie rustique: Recueil de planches I, Labourage*, pl. 1.

[49] *Semer*, 14: 942 b.

[50] *Agriculture et economie rustique: Recueil de planches I, Semoirs*, pl. 1–3.

[51] *Sembrador, Supplément*, 4:766 b.

[52] *Cultivateur, Supplément*, 2:666 a.

[53] *Faulx*, 6:435 a.

is indication that scythes were used for all grass and grain crops except wheat,[54] and the engraved illustrations plainly show haymaking with scythes and grain harvesting with sickles.[55] As late as 1794 a representative to the National Convention from Oise, one Coupé, sought to "introduce" in France the Flemish cradle for hastening the grain harvest of the Revolution.[56]

*New Crops.* In the eighteenth century the specter of famine loomed always in the background of men's minds. This specter was most real to the peasants and to the urban proletariat, but even the gentlemen intellectuals could ill afford to ignore it. In their humanitarian zeal for reform, some of them ventured to avert food shortages by introducing new crops that would produce when old ones failed. In the *Encyclopédie* the scientific inspiration for this attempt came from the naturalist Daubenton, who stated that the principal objects of agronomy and botany are not only to perfect existing plants but also to change their very nature. Is it not possible to hope, Daubenton asked, that by substituting pollens one might produce new seeds from which "we will be able to obtain a kind of mule-plant" as has been done with animals? He went on to point out that the botanists should also work to introduce more new plants from abroad. "The elm, the peach, the apricot, the horse chestnut have been transplanted from far away.... How many others which seem too delicate for our climate might succeed if acclimated gradually?"[57]

If the *Encyclopédie* indicates no contemporary success in plant hybridization, it does reflect considerable activity in the importation of new crops from abroad and in spreading the cultivation of certain plants already grown in France. For feeding livestock, various grasses and legumes came under consideration, among them vetches (*vesce*) to be sown with oats and mowed after the fifteenth of May and fed to livestock along with oats. Sainfoin was likewise enthusiastically advocated as a feed and forage crop, which, if cultivated "according to the new method of M. Tull . . . will have stalks up to 5 feet tall with clumps of red flowers 3, 4, and 5 inches long." An arpent of sainfoin could, it was stated, produce "as much fodder as 30 or 40 arpents of ordinary meadow." Again, trefoil (*treffle*) was esteemed for its effect on the soil and for the quality of its hay. Trefoil was to be sown with barley or oats in the early spring or with wheat or rye at Christmas time. As regards the salubrity of these crops as green manure, there was, as indicated earlier, a certain hesitation. Diderot added his voice to those of the doubters when he stated that it was not a good plan to sow the fallow with peas or vetches because these plants exhaust the soil.[58]

In the light of English emphasis on the use of turnips as rotators and as a feed crop, one might reasonably expect considerable attention to these vegetables in the *Encyclopédie*; such expectations are not fulfilled. Under *Navet* one finds the statement that turnips were grown rather widely in France for human consumption, but there is no mention of them as rotators or as feed. A turnip-like root crop, spergula, was mentioned casually as being suitable for feed.[59]

Two other more-or-less novel crops were rice and maize. About Indian corn, there was some enthusiasm. A contributor remarked that the culture of this plant was of world-wide interest since all America and parts of Asia, Africa, and Turkey subsisted on nothing but maize. The author stated that considerable maize was grown in Spain and that more of it should be cultivated in France.[60] In the article on rice, de Jaucourt lamented that France was dependent upon Italy and Spain for most of its rice supply. He pointed out that rice is suited for immediate human consumption and that, therefore, legislators might do well to favor rice culture in order to promote population growth. He also indicated that rice culture had been forbidden since well before the middle of the century in Roussillon, an area well adapted to rice, because its culture in swamps and standing water was considered by the unenlightened as conducive to disease.[61]

Probably the most exciting new crop in late eighteenth-century France was that high-producing and nutritious immigrant from the New World, the humble white potato. According to Turgot, who undertook the first real campaign to introduce

[54] *Uni*, 17:308 b.

[55] *Agriculture et economie rustique: Recueil de planches I, Semoirs*, pl. not numbered.

[56] Jacques Michel Coupé, *Moyens pour la célérité de la moisson et la conservation des recoltes* (Paris, 1'an III).

[57] *Botanique*, 2:333 b–334 a.

[58] *Vesce*, 17:190 a; *Sainfoin*, 14:518 a; *Treffle*, 16:576 b; *Jachère*, 8:429 b.

[59] *Navet*, 11:49 a–b.

[60] *Maïs*, 9:888 b.

[61] *Riz*, 14:306 b–307 b.

the tuber as a staple while he was intendant at Limoges (1761–1764), potatoes were well established by mid century in various parts of France as a new food for livestock but not for human consumption. Probably one of the most backward *généralités* in the kingdom, Limousin, of which Limoges was the intendant's seat, was notorious for its poverty and for the periodicity of its famines. Turgot noted that the peasants of Limousin raised for subsistence principally rye, chestnuts, and buckwheat; buckwheat was often spoiled by autumn rains or frosts; chestnuts thrived in abundance only one year in six. The potato offered, it seemed to Turgot, more certain resources. After determining that it was possible to harvest a return of one or two hundred to one in potatoes as compared with, say, twenty to one in wheat, Turgot's enthusiasm for the novel vegetable mounted accordingly.[62] The almost wild mountaineers of Limousin, notorious for their poverty, their obstinacy, and their distrust of anything new,[63] were at first unresponsive to Turgot's campaign, still believing that potatoes were fit for animals only.

The *Encyclopédie* reflects a changing attitude toward potatoes. In volume 13 of the original set under *Pomme de terre*, there appears a short and cursory article reporting that potatoes were cultivated then (sometime between 1757 and 1765) in many countries of Europe and notably in certain provinces of France: Lorraine, Alsace, Lyonnais, Vivrais, and Dauphiné where the peasants obtained their principal nourishment from this root during a good part of the year. The article concludes, however, with a disparaging note of doubtful accuracy:

> It [the potato] cannot be included among the agreeable foodstuffs; but it furnishes abundant and sufficiently salubrious alimentation for those who demand only to be filled up. The potato has been justifiably condemned in that it tends to produce flatulence in its consumer; but what are a few gases to the vigorous intestines of peasants and laborers?[64]

The article on the same subject in the fourth volume of the *Supplément* (1777) is entirely different in approach. Forty columns long (equivalent to about 80 pages), the article by Engel indicates that by the seventies the potato had definitely "arrived" as a subject for enlightened enthusiasm. Intimating that the author of the article, *Pomme de terre*, in the original *Encyclopédie* did not realize the differences between *pomme de terre* and *patate* and *topinambour*, the author proceeded to straighten the matter out. Then he launched into a discussion of the origin of the potato and accepted the theory that potatoes were brought from Virginia, where they were very common and of a quality superior to those in Chile. Emphasizing the extreme productivity of this plant, the author described the most remarkable varieties he had imported and observed. A detailed account of the potato culture follows, in which the author sounded a note of caution. "There is perhaps no plant which requires such careful cultivation as the potato—not even excepting the vine—and which, on the other hand, reimburses such care more abundantly."[65] It is interesting to note that this attitude was contrary to the line developed later by the most famous French potato propagandist, Antoine-Augustin Parmentier, who recommended general potato production not only because of its high productivity but also because he believed that the plant demanded less of the soil and of its cultivator than any other crop.[66]

On the basis, then, of the articles treating of new food and feed crops and artificial grasses, we may tentatively draw two conclusions concerning French attitudes toward these subjects in the late eighteenth century. First, the emphasis was on food for human consumption rather than on the balanced husbandry characteristic of the English new husbandry. Second, French opinion was undergoing a change in the years 1751–1777, most marked in the years after 1765, a change indicated in the *Encyclopédie* by a developing willingness to accept novel food crops.

*Fertilizers.* Speaking like a true son of the Enlightenment, the author of the article, *Engrais*, in the abbé Rozier's *Cours complet d'agriculture* remarked: "The earth will not grow old, will not be exhausted no matter how much we cultivate it, if we cultivate not according to our own laws, customs, or prejudices but according to the earth's laws and principles." He went on to say that, productive as it is, the surface of the earth, if made to produce year after year without a rendering back of what is taken out, will become an obdurate

[62] A. R. J. Turgot, *Oeuvres et documents le concernant*, ed. by G. Schelle (Paris, 1923), 2:40–41, 3:27.

[63] Douglas Dakin, *Turgot and the Ancien Régime in France* (London, 1939), 37.

[64] *Pomme de terre*, 13:4 a–b.

[65] *Pomme de terre*, *Supplément*, 4:473 b–476 a.

[66] Antoine A. Parmentier, *Avis aux bonnes ménagères des villes et des campagnes sur la meilleure manière de faire le pain* (Paris, 1777), 82–83.

crust.[67] Although Rozier's work was published some years after the *Encyclopédie*, this statement is in substantial agreement with the general attitude of the Encyclopedists toward the subject of fertilization. Moreover, the contributors let the bright light of their attention play upon this important and absorbing problem more than upon any other single one in the field of agriculture. The present writer has found thirteen articles dealing with the subject directly while the majority of the other articles concerned with agriculture touch on it to more or less degree. In the formal general article on the subject, *Engrais*,[68] Le Roy asserted that fertilizers are the greatest agricultural resource, that they make up for insufficient tillage and even correct the intemperateness of the seasons. "They are expensive, but what they cost is for the cultivator an investment at the highest rate of interest, an honorable usury which laws and customs should encourage."

Le Roy's emphasis seems to have been a double one: fertilize to maintain good tilth and also to ensure sufficient plant nourishment. He went on to say that he had no intention of deprecating the idea of frequent tillage, but no matter how well the soil is cultivated, if grain is sowed on it without a previous application of manure, the soil will be pressed down (*affaissée*) by the end of winter and the roots of the grain will show on the surface. A fertilizer, by reason of its continuous fermentation, would prevent such packing and ensure good tilth. Referring obliquely to Jethro Tull and his French followers, Le Roy condemned those who maintained that plants subsist on the most subtle portions of the soil which are made available by completely pulverizing the earth rather than by fertilizing it. "It is difficult to persuade oneself," the article continues, "that a mechanical division of the soil can furnish enough of the subtle, escapable portions of the soil for nourishment. A continuous production must consume these particles, and only fertilizer will supply them again." It must be kept in mind, Le Roy insisted, that manure is only the plants themselves a little changed, that it contains salts and oils which surely contribute to the nourishment of plants.[69]

In the course of this long article, Le Roy surveyed the gamut of known fertilizers as well as the methods and time of application. Among fertilizers, he pointed out that manures were most generally accepted and used but that it was not always understood that all manures were not suitable for all types of soil: sheep manure should be reserved for "cold" land and only moderately "strong" soil; horse manure for "cold" land and "strong" soil; cow manure for "warm" land and light soil. As a rule, manure should be spread on the field during the fallow year. After that the field should be planted to oats or barley followed by another year of fallow; then manured again before turning the field over to another crop of grain. Le Roy added that instead of losing the use of the field during the second fallow year, one might plant peas or vetches "which give excellent forage, extirpate the weeds, render the soil light without exhausting it excessively, and prepare it perhaps better than tillage for another planting of grain." To be applied, manure might be spread by hand or applied directly by the animals themselves. He pointed out that some farmers hired flocks of sheep for the purpose of folding them on their fields.[70]

In almost all of France, a dearth of good manure was considered one of the outstanding obstacles to successful agriculture.[71] Recognizing the fact that manure was expensive and often unavailable, Le Roy gave his formula for farming a run-down farm "denuded of manure":

> I would sow part of the land in grass, trefoil, sainfoin, etc., and would reserve for grain only such portion as I could manure, thereby reducing my expenses for plowing, etc. Sown in badly prepared soil, these artificial grasses would not produce big harvests, but they would furnish nourishment for several animals to whose manure I would owe the fertility of my fields, and the artificial meadows would themselves be improved at the end of three or four years. Ameliorated by repose, they would have become fit to carry grain in abundance; the straw from this grain will put me in a position to nourish a larger quantity of livestock and my barnyard will be full of manure.[72]

Combining, then, manuring with grass husbandry, Le Roy showed a rather high degree of agricultural

[67] Rozier, *et al.*, *Cours complet d'agriculture*, 4:216–217.

[68] *Engrais* is equivalent to our word fertilizer while *fumier* is equivalent to manure.

[69] *Engrais*, 5:684 b.

[70] *Engrais*, 5:685 b.

[71] Many references from the contemporary literature could be given in support of this statement. For reliable secondary authority, see Sée, *Esquisse d'une histoire du régime agraire*, 38, and Emile Justin, *Les Sociétés royales d'agriculture au xviii^e siècle, 1757–1793* (Saint-Lô, 1935), 46–47, 160.

[72] *Fumier*, 7:366 b.

enlightenment but not the intensive orientation of a Townshend.

The mineral fertilizer that was in greatest favor with the *agronomes* was *marne*, evidently a metamorphosed fossil deposit which was found, according to Le Roy, to benefit the land for as much as from 18 to 25 years. Often buried at great depth and abundant only in a few localities, this fertilizer was used chiefly by wealthy farmers. It is evident from the way Le Roy and others referred to the action of this fertilizer (*i.e.*, its "warmth" and its "singular activity") that there was little understanding of the reason for its rather extraordinary effects. However, the contributor of the article on *Marne* came very near to the truth of the matter when he indicated that this mineral is best suited for low and wet soil which, in farmers' language, are "sharp and cold." *Marne*, he went on to say, is absorbent and alkaline and combines with the acid portions which dominate such soils. "By means of the combination of this acid with the *marne*, there are formed, according to the language of the chemist, neutral salts which can increase the vegetation greatly."[73] There was an opinion, not so scientific as the above, that after the *marne* was expended, the soil was left in worse condition than it had been before application, a state of affairs that made the soil like a drug addict in that the condition could only be remedied by ever-greater reapplications of *marne* until that which had enriched the father ruined the children.[74]

The bulk of the remaining articles dealing with fertilizer reflect, in the present writer's opinion, a general feeling of desperation typical of the period in France over the matter of soil supplementation. The *agronomes* understood the necessity of fertilizer; and, at the same time, they understood that because of the scarcity of livestock they did not have enough. Hence such expedients as peat, coal and coal ashes, chopped-up seaweed, sawdust, and salt.[75] It is of interest to note that the remarks under *Houille* (coal) pertain entirely to agriculture. In an article 6½ columns long there is no mention of coal as a fuel.

*Animal Husbandry.* Among the *agronomes*, Duhamel du Monceau and Le Roy were aware that the use of fertilizer makes for close relations between field husbandry and animal husbandry. The *Encyclopédie*, however, shows little interest in animal husbandry, and, save for Daubenton who worked at improving sheep, one looks in vain in the France of this period for a Bakewell or a Collings. We find an indication of the attitude of the *Encyclopédie* to this important subject in the wonderful diagram in the first volume of the *Tables analytiques*.

This diagram, which was intended to organize all knowledge, takes the form of a great spreading tree festooned with fruit similar to the "balloons" of modern comic strips. These fruit grow along the various branches of the tree and contain the names of the sciences or arts they represent along with concise explanations as to the nature of those arts or sciences. In our climb up the tree to find agriculture and animal husbandry we start at the base of the trunk, ascend through Understanding, to Reason, to Philosophy where we move off to the right on a branch bearing the fruit of Natural Science, whence we climb to one of the subbranches labeled *La physique particulaire*. After passing several branchlets, we find Botany upon which there are two growths, like warts on an apple, marked Gardening and Agriculture. To find any fruit pertaining to animal husbandry, we climb down to a fork leading off to Zoology where we find two branches, one of which seems promising, for on a very slender twig we find *La Vetérinaire* which is defined as the art of shoeing horses and of treating them when they are sick or injured. On another twig we find *La Manège* which is the art of disciplining and dominating horses. Then there is Falconry, Hunting, Fishing, and finally Anatomy, but nowhere is there mentioned a cow, a sheep, an ox, or an ass.[76]

In the body of the *Encyclopédie*, the impressions we gained during our climb in the tree of knowledge are reinforced. Under *Taureau* there is nothing about bulls as a factor in husbandry but a good deal about bulls in mythology, in sculpture, and in bullfighting. Under *Chevre* (goat) there is the statement that goats probably are not such evil animals as they are reputed to be and that it is possible to make passable cheese from their milk. In the same article it appears, however, that goats are evil animals with poisonous saliva and breath. Goats were forbidden in Nivernais and Berri while in many other places they were merely tolerated.

[73] *Marne*, 10:132 a.

[74] *Engrais*, 5:685 a.

[75] *Houille*, 8:323 a; *Charrê*, 3:216 a; *Tourbe*, 16:470 a-b; *Fertiliser les terres, Supplément*, 3:30 a.

[76] *Essai d'une distribution généalogique des sciences et des arts principaux*, table 1, folding diagram after title page.

Sheep received attention primarily in connection with the wool industry, thus reflecting a consuming desire on the part of the French to be independent of the Spanish Merino wool.[77]

Among farm beasts, only the principal draft animals, oxen and horses, received great attention in the *Encyclopédie*. What tractors and combines are to the American farmer of today, the horse was to some eighteenth-century French reformers, notably the physiocrats, who were assiduous in recommending man's noble friend as a more efficient substitute for the patient but slow ox. In his article *Fermier*, François Quesnay expressed conviction that in the new culture horses must replace oxen, that the use of the latter was in large measure symptomatic of and responsible for the comparative backwardness of French agriculture.[78]

*Conclusion.* The concept of an "agricultural revolution" appears, then, on the basis of what must be accepted as a representative and significant source, to be inapplicable to France in the third quarter of the eighteenth century on two counts. First, the revolution did not happen; second, no very large group wanted it to happen. It was thus neither a physical nor an intellectual event. This fact is clearly reflected in the *Encyclopédie*—a collection of writings sufficiently eclectic to include a valid sample of enlightened opinion on agricultural technology. The articles in the *Encyclopédie* were not, of course, intended for peasant consumption. They were read by those nobles and bourgeois who took a personal interest in farming. Yet, save for the physiocratic contributions, the work as a whole offered little more than generally sound refinements on techniques in current practice. By and large, the suggestions were practical and conservative, not revolutionary.

The complex of ideas presented in the *Encyclopédie* fails to square with the technical-intellectual aspects of the contemporary agricultural development in England. In France there was opposition to the idea of intensive rotations; horse hoeing was favored only by a scattered few. Grass husbandry was accepted, in the *Encyclopédie*, only as a variation on the fallow system; new crops seem to have been advocated principally as an antidote to recurring famines. It is more than possible that the heavy emphasis on fertilization was part of a continuing tradition in French farming rather than a new departure. The interest in manure and manuring did not lead to a concomitant interest in animal husbandry. Far from rebelling against and trying to change the fundamental nature of French agriculture, our intellectuals seem to have been in substantial accord with the actual trend in French farming.

[77] *Taureau*, 15:939 a–941 a; *Boeuf*, 2:291 a–293 a; *Chevre*, 3:321 a; *Laine*, 9:178 a.

[78] *Fermier*, 6:529 a–532 b.

## A NEGLECTED SOURCE OF CORN BELT HISTORY: PRIME'S *MODEL FARMS*

EARLE D. ROSS

*Department of History, Iowa State College*

In the midst of the hopeful lull in western agriculture between the Granger agitation and Populism, there was published in 1880 an imposing octavo describing the organization and methods of selected farms in ten Middle Western States, written by the owners and compiled and edited by a prominent Illinois stock raiser and agricultural journalist, S. T. K. Prime.[1] More or less scattered reports from farmers in different areas had been made from early times. Agricultural journals had always encouraged their readers to exchange experiences of achievements and failures and the

[1] The complete title page of the first edition reads: *The Model Farms and Their Methods; Giving the Experiences of Over One Hundred Successful Farmers in the Various Branches of Husbandry in Different Portions of the Country; Stock Raising; Fruit Growing; Dairying; Tile Drainage; Cost and Profits of Mixed Husbandry, Etc. With Over One Hundred Illustrations and Plans of Buildings*. Edited by Samuel T. K. Prime. Chicago: Donnelley, Gassette and Loyd. 1880.

This book with xx, 5–807 pages was copyrighted by Richard R. Donnelley. *The American Catalogue, 1876–1884* (New York, 1885), 319, lists a subscription edition issued by A. Knobel & Company, Chicago, 1881, in three styles with graduated prices: regular, $3.75; library style, $4.50; half morocco, $5.25. No notices or reviews have been found.

State societies and the agricultural division of the Patent Office had compiled their "statistics" from volunteer reporters. But an individual and relatively systematic survey of a key region was a new and obviously financially risky venture. The project was worthy of its versatile and ingenious promoter.

Samuel Thornton Kemeys Prime belonged to a family that had been long in, if not upon, the land, his forbears having migrated from England in the first half of the seventeenth century. Each succeeding generation had produced literary and professional leaders. His father, Samuel Iraeneus, one of three brothers distinguished as theologians, and writers, was the long-time editor of the *New York Observer*, a contributing editor to *Harper's Magazine*, and the author of some two score books in theology, social problems, and biography.[2]

Prime was born in Connecticut in 1834 and educated in the schools of Rahway, New Jersey. His father felt that his interests "inclined to business" rather than to scholarly pursuits, and he worked in a bank in New York City until it suspended in the panic of 1857. The next year he married and migrated to northern Illinois where he took up a half section near Dwight. Inexperienced in farm life, especially that of the developing prairie, he had the ingenuity and perseverance to develop a stock farm to the high stage of cultivation described in his book.[3]

At the same time Prime participated in State and community affairs. He was active in the inception and developed program of the Granger movement in Illinois. At the second State convention of Illinois farmers in January 1873, Prime was secretary of the committee on State organization and presented the plan for the Illinois State Farmers' Association. The same year he was joint author of the platform of the farmers and People's Anti-Monopoly Party of Livingston County, Illinois, which gained wide attention for its outspoken arraignment of corporate and governmental abuses. He held various town offices and was a promoter of improved roads and land drainage.[4]

[2] Edward D. G. Prime, *Notes Genealogical, Biographical and Bibliographical of the Prime Family* (New York, 1888); *Dictionary of American Biography*, 15:226–229 (New York, 1935).

[3] *History of Livingston County, Illinois* (Chicago, Wm. LeBaron & Co., 1878), 676; *Portrait and Biographical Album of Livingston County, Illinois* (Chicago, Chapman Bros., 1888), 1158–1160.

[4] Jonathan Periam, *The Groundswell* (St. Louis, 1874), 256–257; *Album of Livingston County*, 1160–1161.

The family bent for journalism was early applied to his developing agricultural interests. From the 1870s he was a regular contributor of agricultural articles to the *Chicago Tribune* and was later a correspondent and feature writer for such periodicals as the *New York Journal of Commerce*, the *American Rural Home* of Rochester, New York, and the *Farmer* of Saint Paul.

After conducting a department of crop reports in the *Tribune* for the season of 1878, Prime established his own crop reporting service with correspondents throughout the Western States and a staff of a dozen clerks to tabulate the returns. He conducted this service from Chicago until his death in 1907.[5]

The model farm survey was evidently undertaken in 1878 and completed early in 1880, the year of publication.[6] In the foreword the editor offered a "Common-sense Hand-book for Farmers . . . thoroughly practical and useful." Such reports of actual experiences by successful practitioners provided, he was convinced, the best guide to sound management and practices. No alterations in style or matter had been made to accord with the "notions of the editor" or with any preconceived theories. He took no responsibility for differences of opinion as they reflected "varied experience." Prime was quick to absolve himself and his contributors from any intent to promote a brand of implements, a variety of grain, a breed of livestock, or a special method. No less was regional impartiality sought, and "those seeking homes in the Far West" were assured that the book would be "a safe and useful guide."

Reports were obtained from 159 different farmers;[7] several owned and managed a group of farms. The distribution by States was rather uneven: Illinois, 58; Kansas, 28; Iowa, 20; Nebraska, 13; Ohio, 11; Minnesota, 11; Indiana, 8; and Michigan

[5] *Album of Livingston County*, 1160–1161; *Who's Who in America*, 1899–1909 (Chicago, 1899–1908).

[6] The *Album of Livingston County*, 1161, states that "In 1878 he compiled and edited" this work, but the crop returns wherever listed extend through the season of 1879, and one gives the prospects early in 1880.

[7] Aside from the editor, three contributors have been identified: James D. Adams, the noted cattle breeder of Buena Vista County, Iowa; Andrew Failor (spelled "Failer" in the book), fine stock breeder, pioneer Granger, and promoter of rural education of Jasper County, Iowa; and Jesse W. Fell, land promoter and reformer of McLean County, Illinois. Doubtless local historians would recognize many other influential leaders.

and Missouri, 1 each. The articles varied in length from 1¼ to 16 pages and averaged from 4 to 5. Most gave general descriptions of organization and management, but a few were devoted to special subjects such as hedge propagation, orchard culture, plans of a building, an implement, or a feeding device. Most of the returns were of general farming, but there were a few fruit and truck enterprises and one Kansas ranch. Farm units varied from 20 to 2,000 acres.

The variety of treatment in style and emphasis indicates that no formal questionnaire was issued,[8] but it is evident that certain subjects of general interest such as rotations, fencing, drainage, and water supply were stressed in editorial inquiry. A number indulged in personal reminiscences that throw interesting sidelights on the sources and conditions of frontier settlement.[9]

Unlike most editors of cooperative works, Prime was restrained in his own particular contribution. His article was kept well within the average length, and he did not make extravagant claims for his evidently highly successful enterprise.[10]

The numerous illustrations throughout the book are as practical and realistic as the descriptions. They consist of plans of farm layouts, diagrams of buildings and implements, especially those locally improvised. The one artistic liberty was taken with the conventional, idealized engraving of a Hereford cow.

The composite impression that the reports provide is that of the characteristic corn-belt economy in its early stage. In the established areas, emphasis, systems, and equipment were all tending toward that pattern. Small grain cropping prevailed only in the newer regions.

Corn and grass were the key crops. Elaborate discussions of cultivation and utilization were presented. Forestation, both in connection with the Timber Culture Act and individual initiative, received unusual attention.

Stockmen, who composed the great majority of the reporters, were becoming decidedly breed conscious. In the hog lot, the Poland China, pure and crossed, was far ahead of all rivals—"the hog for the million," as one enthusiast acclaimed the breed. Next in favor were the Berkshires.

The Shorthorns or "Durhams" ruled favorite for beef as well as supplemental dairy purposes, although the Herefords were gaining in favor among the larger herdsmen. For dairy specialists the Jersey stood unchallenged, although the Holstein was beginning to find strong backers largely as a dual-purpose animal. The fine qualities of the Devon, including superiority as oxen, caused the admirers of the breed to perpetuate their herds.

In sheep husbandry the dual-purpose aim was putting the Cotswold and other heavier carcass breeds well ahead of the Merinos.

The alert, gentle, medium-weight Percheron was proving the most satisfactory of the horse importations. Next in favor was the Clydesdale, and Morgans especially of the heavier type continued in favor with many. Before the general use of heavy machinery the larger draft animal was not in demand. The favorite size was 1,100 to 1,200 pounds with rare preference for as heavy as 1,400. Oxen lingered mainly for supplemental and pioneer use. Mules were reported in only a few cases, usually with appreciation.

For model farms at this stage, the use of machinery was not as complete and common as might have been expected. In general equipment for cultivation was more elaborate than that for harvesting.[11] The use of the combined mower and harvester persisted to a marked degree and was justified on the ground of economy. References to self-binders were comparatively rare.[12] Windmills provided the main stationary power, especially for pumping. There were warnings against overinvestment in machinery and an oft repeated emphasis upon care and repair of all equipment.

Fencing was a topic of general and major concern. A large survival of hedges, especially Osage, was reported, but with all the wishfulness with which such enclosures were defended it is evident from the general trend of the reports that such plantings were running out or being grubbed out. In timbered areas, rail, of the various types, and boards continued to be used with a prodigality

[8] An article on apple growing and marketing is in the form of an old-time didactic dialogue in which the interlocutor interviews successful and unsuccessful orchardists. *Model Farms*, 704–710.

[9] For examples, see *ibid.*, 95–100, 303–306, 340–343, 354–356, 370–371, 486–487, 541, 572–573, 576–577, 603, 618–621.

[10] *Ibid.*, 123–129.

[11] See the detailed inventory of machinery on a triple farm enterprise in Jennings County, Indiana. *Ibid.*, 761.

[12] A stock farmer of Henry County, Iowa, reported: "There are a few Harvesters in this locality, but farmers do not generally raise grain enough to make them pay." *Ibid.*, 500.

astounding to later timber-conscious generations. Smooth wire was merely supplemental. In newer regions and upon all the large undertakings, the new barbed wire was proving to be the most adaptable and economical.

Detailed explanations and careful drawings indicated an increasing attention to the construction, location, and arrangement of farm buildings. "Model Farm Homes" were presented in detail by several writers. Plans included both surroundings and arrangement in which it is pleasing to note that the convenience of the kitchen was given especial attention.[13]

These model farmers prided themselves on their business ability in planning their season's work and in buying and selling no less than in their technical skill as cultivators. Much attention, purportedly, was given to the selection of the holding, the apportionment of investment, the farm layout, the adjustment of the season's undertaking, and the methods of marketing. There was conscious pride in the keeping of farm records for particular projects and for the enterprise as a whole. A business man of Ashtabula County, Ohio, who conducted a "hardware store, banking house, and flouring mill" during his working hours, early each morning planned the work for his men so efficiently that for years the farm had made the best return of any of his varied investments.[14] A stock farmer of Mercer County, Illinois, had reduced the borrowing of capital to three rules and the marketing of farm products to six.[15] Assuming a reasonable accuracy of records of costs and receipts and a representative sampling of farms, these returns provide at least a rough basis for comparing the relative economic advantages of different regions.

With this select group of supposedly superior farmers there was no little pretension to scientific methods in cultivation and husbandry. The senior proprietor of a father-and-son fruit and vegetable farm in Houston County, Minnesota, openly avowed his reliance upon book learning, general and special: "Agriculture is an art and a science, the individual, the artist, the science consisting in the combined experience of the most successful men of the present and past ages. To avail myself of the benefit of science, I have been a regular subscriber and constant reader of several agricultural and horticultural periodicals, and a purchaser of the best books bearing upon my business, and my library now contains over two hundred volumes of agricultural, scientific and literary works." For "the study of natural science and for the entertainment of visitors and friends" the family had collected and arranged a "museum and cabinet" of the wild animals, plants, and minerals of the region.[16] A prosperous stock raiser of Washington County, Iowa, was a student of Andrew J. Downing's works on landscape gardening.[17] The manager of a large farm in Ashtabula County, Ohio, from youthful experiences on a farm and training at an agricultural college was confident of his ability to make effective applications of verified theoretical principles.[18] A pioneer settler of Nemaha County, Kansas, since 1865 had been the representative of the United States Department of Agriculture for testing and distributing seeds, plants, and trees in his region.[19]

In most areas represented, the dangers of cropping were realized, and efforts were being made with varied degrees of success to secure balanced rotations. In all but the newest regions the need for fertilization was appreciated. Animal and green fertilizers were being applied, but practically no commercial products were used except the doubtful "land plaster."

In the older regions the essential place of drainage was being generally recognized, and many trials were reported. It is evident from the descriptions, however, that projects were often unsystematically planned and primitively devised.

At best in the years before experiment stations and extension services, practices were certain to be largely empirical, based upon misunderstandings and unverified findings, and the utilization of inadequate or inappropriate techniques. Relative success was undoubtedly due in large part to primal fertility, small investment, and the large proportion of subsistence, along with rigid thrift and persistent labor by all members of the family.

Traditional fallacies and credulities appear throughout the book. There was the prevalent belief in the efficacy of excessively deep plowing. Rotation systems were far from being stabilized and many specialties were unproven. Fertilization was, at best, unsystematic, and spraying was not practiced. Here and there the "common stock"

[13] *Ibid.*, 120, 236, 378–380, 391–392, 532, 654–656.
[14] *Ibid.*, 721.
[15] *Ibid.*, 269, 272.
[16] *Ibid.*, 541–542, 544.
[17] *Ibid.*, 431.
[18] *Ibid.*, 687–698.
[19] *Ibid.*, 357.

continued to be defended as the most adaptable, and, hence, profitable. With many the "dual-purpose" aim continued to be an obsession. Breeding fantasies went to the length of a reported experience that "the best horse for general farm use is a cross between the trotters and some of our heavy draft horses, the first giving style and activity, and the latter giving size and strength."[20] Proposals for the prevention of diseases such as hog cholera, black leg, and foot rot ranged from such specifics as soap suds, burdock roots, artichokes, and a mixture of lime, salt, sulphur, and charcoal to breeding (both "in" and "out" recommended), a wide pasture range, preferably in the forest, dry sanitary yards, and nutritional balance.[21]

Throughout, the reports reflect a pronounced and assured individualism. The only reference to governmental activity was made by the reporter for the United States Department of Agriculture who felt that the service "should receive more liberal help from Congress." Organizations for protection and cooperative effort were not mentioned. The only evidence of class-conscious discontent was in a rather conventional complaint against the middleman, with no suggested remedy.[22]

In general, in these years of favorable rainfall and of partial recovery of prices,[23] the outlook was decidedly optimistic. There was a seeming assumption that natural and economic hardships were passing with the frontier. Drouths, devastating storms, grasshoppers, and epidemics were referred to reminiscently. Most of the group, too, seemed confident that, by foresight and persistence, they had solved measurably the essential business problems. Under the modest guise of assuring the doubtful or encouraging the timorous, not a few success stories were related.[24]

In spite of the editor's avowal of geographical objectivity, the opportunity for regional boosting was not wholly neglected. Crop failures were unknown in central Illinois, and Carroll County to the northwest was noted not "for big farms, but for big farming."[25] Southern "Egypt" in resources and location had unsurpassed advantages.[26] "No country in the world offers such inducements to a poor man to commence farming in as does northwestern Iowa" asserted a pioneer stockman.[27] A former New Jersey physician found northern Kansas "unsurpassed in agricultural wealth" and reflected that if thousands of underprivileged city dwellers of the East "would avail themselves of this great heritage, what untold blessings would be bequeathed to their posterity."[28] Nebraska soil appeared inexhaustible. The "unbiased opinion" of a settler who had lived in thirteen different States was that nowhere had he "found so many advantages and so few disadvantages as here in Nebraska."[29] Climatically there was little to choose between the rival claimants in salubrity, seasonal balance, and physical comfort.

Inadequate and inaccurate as many of these reports are, taken as a whole, they provide a valuable source for the initial years of the settlement of the last agricultural frontier.

[20] *Ibid.*, 377.

[21] *Ibid.*, 29, 39, 76, 131–132, 154–155, 229, 267, 435–437, 445, 600–601, 617–618.

[22] *Ibid.*, 244 (a seemingly prosperous general farmer of Kendall County, Illinois).

[23] A large stock raiser of Atchison County, Kansas, reported, ironically for future years: "Clover is our principal crop, and if it were not for the wet Junes and Julys we have had for two or three years past, I should be its strong advocate." *Ibid.*, 343.

[24] For typical examples, see *ibid.*, 49–54, 55–62, 88–89, 245–248, 303–309, 402–403.

[25] *Ibid.*, 105, 285–286.

[26] *Ibid.*, 25–26.

[27] *Ibid.*, 471.

[28] *Ibid.*, 348.

[29] *Ibid.*, 622, 632.

# AGRICULTURE AMONG THE SHAKERS, CHIEFLY AT MOUNT LEBANON

RUSSELL H. ANDERSON

*Western Reserve Historical Society, Cleveland, Ohio*

The Shakers are members of a distinct religious organization, known as the United Society of Believers, and their economic activities such as agriculture, with which we are concerned, are, in a real sense, a part of their religion.[1] One of the tenets of their faith which shows their attitude toward such temporal matters is expressed in the admonition of their founder, Mother Ann Lee, to "put their hands to work and their hearts to God." They were working people, and work became a matter of great moment, not for its own sake but as an expression of the worth of the individual and as a part of his obligations in life. When the writer commented to an aged Shakeress to the effect that everyone spoke in the highest terms about the quality and reliability of Shaker products, she looked up and with evident sincerity said, "They are built on honor." That one remark tells much about the Shakers.

This "peculiar" sect had its origins in France, but the movement spread to England, where its beliefs found favor among certain of the Quakers, with which it should not be confused, however. After a period of persecution, a small group of believers, headed by Ann Lee, came to America in 1774 and founded the first community of the society at Watervliet, New York, a short distance from Albany, two years later.

What were the beliefs of these newcomers, who were, incidentally, suspected of being English spies? While they held to no definite body of theology, they were what might be termed pietists and perfectionists. They believed in the intimacy and direct leadership of God and the continuing revelation of his purposes. Much of their behavior was based on the belief that ostentation and vainglory were sins. Growing out of their spiritual fervor was the dance which they regarded as a religious expression of long usage. It was this dance or "exercise" which caused outsiders to dub them "Shakers" in derision. They adopted the name, as Americans had previously accepted "Yankee Doodle," and made it a badge of honor. To rise above the "sins of the flesh" they practiced celibacy, and to avoid avarice and greed they advocated and practiced communal ownership of all property held by them. This sets the pattern for their agricultural activity. Through these beliefs and their attitude toward the dignity of labor and honest workmanship, their industry became a real element of their religion.

It was a part of their religious duty to pull their part of the load, to support themselves, and to contribute something to the aid of the less fortunate. Their economic activities were largely centered about agriculture, horticulture, and the mechanical arts involved in what might be termed "small manufactures." In common with most of the somewhat similar communal organizations of the day, they began with the land since the raising of their food and clothing materials was naturally their first concern. The usual pattern in forming a new community was to enlist one or more farmers to contribute their farm or farms as the nucleus of the new venture. As others joined, they placed their resources—money, tools, or land—in the common pool. Where the land lay adjacent it was incorporated into the farm. Sometimes when it was some distance away, it was traded for adjacent land or maintained as an outlying farm with tenants or hired labor.[2] Their small manufac-

[1] The author presented an oral version of this article at the session of the Agricultural History Society with the American Historical Association at Boston on Dec. 30, 1949.

The data used in this article are from the Shaker collection of manuscripts and printed materials in the library of the Western Reserve Historical Society, Cleveland, Ohio. The manuscripts consist chiefly of numerous records with brief daily entries, and some of the minutiae of documentation have been omitted in the interest of reasonable brevity.

[2] Society Inventories, New Lebanon, 1838–1864, year 1839; Charles Nordhoff, *The Communistic Societies of the United States* (New York, 1875), 187, 195, 198, 211; "The Canterbury Shakers," *Granite Monthly*, 8:310–311 (1885); Deacon's Journal, Second Family, Watervliet, 1830–1863, annual summaries; W. S. Warder, "A Brief Sketch of the Religious Society of People Called Shakers," *New View of Society* (London, 1818), 12.

tures, for which they were famous, grew out of the need to provide clothing for themselves, furniture, brooms, etc., for their houses, book binding for their records, etc. Nearly every one of their communities engaged in certain activities such as making furniture and clothing. Others did tin work, book binding, etc., depending upon the skills of the members of the particular group. In some instances the products of their shops and fields were passed among the various communities in exchange.

Reference to these communities requires further explanation. From the first settlement or community at Niskayuna or Watervliet, New York, the movement spread by missionary effort at a time when evangelism was sweeping the frontier area. Around nuclei of new believers new communities were set up, usually with the aid and counsel of members who transferred from established units. Within a given community there were families or orders which were, in the main, separate but under the general direction of the ministry of that community. Thus there were formed some twenty Shaker communities which maintained their entity long enough to establish their position. Some like Hancock (1790) in Massachusetts, Canterbury (1792) in New Hampshire, and Sabbath Day Lake (1794) in Maine are still in existence, with a present total membership of about sixty persons. Others such as Busro in Indiana, the most westerly of the units, fell victim to frontier disturbances and continued only a few years. A community in Florida started late and maintained an uncertain existence for but a short while. Others died a-borning, as did the attempted settlement near Brunswick, Georgia, which appears to have broken up after a few months in 1898. Two thriving communities did continue for years in Maine, 2 in New Hampshire, 4 in Massachusetts, 1 in Connecticut, 3 in New York, 3 in Ohio, and 2 in Kentucky. It is with the agriculture of these communities, particularly that of Mount Lebanon, that we are directly concerned.

One might add that the heyday of the society from the standpoint of numbers, prosperity, and general spirit was about the time of the Civil War when there were about 6,000 members in 18 communities. Charles Nordhoff, when he wrote his well-known book, *The Communistic Societies of the United States*, reported that the 58 families which made up the 18 communities of the society in 1875 held about 100,000 acres of land of which nearly half was in their home farms.[3]

Shaker agriculture has, at the same time, two seemingly opposite attributes. It followed the general line of activity current in a given locality since its members had been recruited there, and in this way it reflected much of the current practice and economic pressures. On the other hand they carried on the customary farming practices remarkably well, engaged in certain unusual activities, such as seed raising, and, in some instances as at South Union, Kentucky, became leaders in the raising of fine pedigreed cattle, somewhat beyond the usual neighborhood farming activity. They bought books on farming, subscribed to farm papers, and were always willing to adopt improved practices and equipment. Treatment of the subject must adapt itself to the peculiar and varying circumstances of the case.

Mount Lebanon, New York, was for many years the seat of the Shaker ministry and may well serve as the principal example of their agricultural practice in the East. This community, which was closed toward the end of 1947, was about 25 miles southeast of Albany, near Route 20 and near the village of New Lebanon. To quote an American visitor in 1864, it was "located on the western slope of the Taconic mountain . . . [which] here rises some seven or eight hundred feet above 'Lebanon Flat,' and about two hundred up its side, and at an elevation of near one thousand feet above tide water, the village and gardens are located."[4] As one goes up the road from New Lebanon today, the tops of some of the buildings peek above trees, and open fields on the mountain side point out the sites of their more rugged farming activities. From an agricultural standpoint its location would not appeal to a corn-belt farmer, but its local situation was relatively attractive and one can readily see why the Shakers spoke of the locality affectionately as "the holy mount."

From its beginning, a farm donated by a Mr. Darrow, the New Lebanon group had, by accretions from new members, and by purchase from savings, increased this to some 2,292 acres in 1850 when the New York legislature undertook an investigation of their activities. Of this amount about 740 acres net had been added by purchase

[3] Nordhoff, *Communistic Societies*, 117.

[4] William Bacon, "Mount Lebanon and Its Pear Orchard," *Horticulturist* (New York), 19:212 (1864).

in the preceding decade. As the Shakers reported to the legislature: "Our lands have been purchased from time to time as the Society became able from its earning and saving, in view of growing grain and other agricultural produce. But as yet, the lands owned by the society are not of sufficient quantity and quality to obtain from them sufficient grain and animals for that purpose and considerable sums are annually paid for flour and grain of different kinds for our domestic wants."

At that time they reported seventeen barns with a ground floor area of 35,000 square feet and three granaries, each two stories high, with a ground floor area of over 5,000 square feet. At that time they reported sales for the year preceding to have been $38,405.35 and explained the low yearly income on the ground that "the faith and principles of the society forbids its members going into speculation and tolerate only such branches of industry as are useful to the public instead of those which tend to superfluity and extravagance. . . . " It should be kept in mind that the above figure includes the sales of herbs, seeds, and miscellaneous manufactures and also that the farming operation was concerned chiefly with supplying the wants of the community. They reported that ". . . the live stock owned by the society, consisting of horses, sheep and cattle are deemed to be only sufficient for the supply of teams, animal food, butter, cheese, wool, &c. for the society's consumption, and would probably amount to no more at present than in 1839."[5]

In 1875 Nordhoff reported that the Mount Lebanon community owned "about three thousand acres of land within the state of New York beside some farms in other states; and several farms in its own neighborhood . . . in charge of tenants."[6] Of this amount only a small portion remained in 1947 and that has now been sold.

One of the conspicuous features of the Shaker village at Mount Lebanon is the great barn, which the writer inspected in 1947. It is 196 feet long, 50 feet wide, and 5 stories high, with walls 32 inches thick and 2 structures, as long as ordinary barns, attached at the side. An English visitor in 1885 wrote: "This large building . . . lies on a hillside with its upper floor level with the main road and the ground-floor opening on the fields behind it. Here are stalls for some seventy cows, and, above, are stores of winter forage, artificial manures and agricultural implements. Every cow has her own stall and knows it. The herd of handsome Holsteins had just arrived from the pastures and were collected in the yard, at the moment of our visit. When the barn doors were opened, each cow ran to her stall and thrust her head between a pair of vertical wooden beams, hollowed out to receive the neck. These beams are hinged to the floor and can be opened or closed, altogether, by pulling a cord, thus releasing or securing the whole seventy at a stroke. Shaker cleanliness rules as absolutely in the barn as in the house, while the mechanical arrangements for collecting and utilizing all the fertilizer produced are perfect. Indeed, it would be difficult to say too much in favor of Shaker agriculture generally. Even ensilage, the latest farming improvement, has been introduced; while for clean, careful and successful tillage, the Shakers can hold their own against Lincolnshire itself."[7] To digress from the Lebanon scene one might mention the splendid round barn at the nearby Hancock community and the large rectangular one still standing at Canterbury.

Livestock production at Mount Lebanon and, indeed, at nearly all the communities was carried on chiefly to meet their needs for food and clothing although at times there was a surplus for sale. The Shakers there raised the framework of a cow barn as early as November 1791.[8] In 1848 a family of 208 persons in this community had 83 cattle (including 46 milch cows and 10 oxen), 163 sheep, 10 horses, and 195 "hen kind." Over the following decade, for example, the number of people and the amount of stock in this group remained fairly constant.

In the spring, in May or June according to the state of the grass, the cows were turned together on the mountain pasture. During the summer the milk from the entire herd was used for making cheese. In the fall, about the middle of September the cows were again separated and returned to the different families again. The journals commonly record, late in October or early November, the

[5] Marguerite Fellows Melcher, *The Shaker Adventure* (Princeton, 1941), 53; New York State Senate, *Document 89*, Mar. 19, 1850, 1–8.

[6] Nordhoff, *Communistic Societies*, 195.

[7] Daniel Pidgeon, *Old-World Questions and New-World Answers* (ed. 2, London, 1885), 123–124. See also Edward Deming Andrews, *The Community Industries of the Shakers* (Albany, N. Y., 1932), 63; Edward Van Alstyne, "The Mt. Lebanon Shakers," *New-York Tribune Farmer*, 5(234):2 (Apr. 26, 1906).

[8] Joseph Bennett Journal, v. 2, 1789–1794.

amount of cheese made during the summer. From 1848 to 1872 the amount of cheese made by one section of this community, the First Order, ranged from about 1,600 pounds to 4,700 pounds, of which varying amounts ranging up to 1,500 pounds were sold.[9]

In 1863 it was recorded that "there had been an improvement in cheese making in our dairy this season, by adapting what is called the Premium Cheese vat, a new invention having a heater to give milk a right temperature. Our folk like it well—think it saves time, &c."[10] The amount of butter produced was more nearly constant ranging from 4,000 to 6,000 pounds of which small amounts were sold.[11]

Hogs were an important part of the livestock at Mount Lebanon until 1845, when this community decided to renounce the use of pork. As their record quaintly puts it, "Now by this power & by a divine oracle now & then that has been given, it is concluded, settled, declared & sworn to be obeyed that Hog shall never again be brought onto Holy Zion's ground."[12] In this connection it should be pointed out that each community determined its own rule in such matters and that other communities continued the use of pork in the usual way.[13] Nordhoff, in 1875, reported that at that time the Shakers at Alfred, Maine, Watervliet, New York, and Union Village, Ohio, ate no pork.[14]

Up to and including 1845, the Mount Lebanon records during the winter months contain frequent references to butchering. As early as 1802 it was recounted that 13,840 pounds of pork was killed by the church community that year. As was customary in those days, these hogs were fed to heavy weights. The numbers, maximum weights, and averages were usually recorded with meticulous care. For example, on November 14, 1804, it was recorded that 9,242 pounds of pork had been killed that year. The heaviest hog weighed 486 pounds, the old hogs averaged 430 pounds, and a "pig" weighed 180 pounds. On December 19, 1839, they killed 8 "pigs" which were 16 months old and averaged 312 pounds. Similar reports can be cited at length with maximums up to 561 pounds and averages ranging from 300 to 500 pounds. Sometimes they employed men "from the world" to butcher for them. Frequently they skinned the hogs and sold the skins. For example, on November 3, 1835, they recorded that they killed "the remainder of [their] hogs, 20 in number, skins weigh 595 [pounds] sold at 7¼ cts." Again on November 15, 1836, they killed 26 hogs and had them skinned. The skins weighed 1,040 pounds and sold for 10¼ cents per pound.[15]

The number of sheep varied somewhat more than that of other livestock, perhaps due to the varying hazards of lambing. They followed the usual practice of washing the sheep about the first of June, a few days before shearing. However, in 1836, they recorded without explanation that they sheared their sheep without washing them. Sometimes the shearing was done by the brethren and sometimes by men "of the world." Little mention occurs in their journals of attempts to improve their sheep although it would have been quite unlike the Shakers had they not seriously attempted to do so. Something may be inferred regarding the quality and conformation of their sheep from a record on July 1, 1842 to the effect that the sheep were so unruly that they could not be kept anywhere except in pens which were 10 or 12 rails high and, the chronicler dolefully added, "with their legs tied together." On this particular occasion they had got into the oat field on the mountain and had done considerable damage. In 1834 and 1835 the clip was about 3 pounds. In the latter year they reduced their flock by one hundred due to a shortage of hay. On one occasion they reported 58 lambs from 49 ewes. On June 19,

[9] New Lebanon Records, Betsy Crosman, 1848–1872, yearly summaries, and Apr. 7, 1861; Nicholas Bennet Journal, no. 1, pt. 1, May 20, 1803, Sept. 14, 1805.

[10] Isaac Young's Domestic Journal, supp., June 1863.

[11] New Lebanon Records, Betsy Crosman, 1848–1872, yearly summaries.

[12] Mt. Lebanon, Society of Believers, Domestic Journal, June 1845.

[13] Isaac Young's Domestic Journal, Mt. Lebanon, Jan. 24, 1876; *Farm Annual of the United Society of Shakers of South Union, Ky.*, 1885; Harvard, Mass., Journal, 1847–1851, Nov. 19, Dec. 21, 1847; Enfield, Conn., Records for 1853–1861, Center Family, Oct. 18, 19, 26, 1860.

[14] Nordhoff, *Communistic Societies*, 179–214.

[15] Bennet-Crouch Journal, Jan. 1, 1795; Joseph Bennett Journal, Dec. 12, 1793, Dec. 3, 1794; Nicholas Bennet Journal, no. 1, pt. 1, Dec. 7, 1802, Nov. 14, 1804, Dec. 2, 1805; Journal of Aaron D. Bill, 1838–1840, Oct. 17, 1835, Dec. 19, 1839; Mt. Lebanon, Society of Believers, Domestic Journal, Nov. 3, 1835.

1836 when they sheared the sheep there were 70 ewes but only 48 lambs.[16]

In a rolling country like eastern New York and New England and in an economy including livestock it was logical that pasture and hay making should occupy a large place. Repeated references are found in their journals to clearing land for cultivation and pasture. Hay was cut on both the "flat" or swamp at Mount Lebanon and on the mountain. In 1802 they spoke of getting the hay in from the swamp without any rain for the first time in the twelve years this meadow had been mowed.

The large barns testify to the place which hay held in the farming operations. At Mount Lebanon the records for many years show a crop of from 200 to 250 loads. These were usually designated "horse loads" but sometimes "ox loads" were included. But they did not always have sufficient hay for their use. A record for May 5, 1835 reads: "Philip & Horace go up Hancock Hollow to look for hay. More than $100 have been paid out for hay in the church & the cattle are almost starving now with but little to give them & [because of] rough weather [there is] scarce any green thing to be seen. I understand that many cattle have died among the world with starvation. Hay cannot be had for less than $10 a ton." So closely was the hay crop correlated with their livestock production that when the hay crop of 1835 proved to be light they recorded in September that they had been forced to reduce their livestock by selling 100 sheep, 12 cows, and 2 oxen.[17]

The Shakers at Mount Lebanon employed the customary scythe and later, in 1856, the mower. They were ever on the alert for new and better equipment, but they weighed its advantages carefully. On July 25, 1837 some of the brethren went to Spencertown "to see a mowing machine made by one Becle [but found] it not suitable for us at the present."[18] In the earlier days the hay was raked by hand, but a horse-drawn rake was introduced in 1827. This was considered a wonderful improvement and was an indispensable implement for many years. In 1842 they were making a new horse hay rake, and in 1862, "Our folks have this year purchased a new horse rake, with wheels, very good." Whether cut with a scythe or a mower the hay which was mowed in the morning was commonly raked and cocked in the afternoon or the following morning. If showers came the cocks were opened or turned and allowed to dry a short time before hauling. In nearly all cases the hay was taken to barns on wagons although in 1799 there is a record of stacking hay over a period of six days. This was before the day of their big barn.[19]

Haying was, indeed, a busy season with the Shakers, as with farmers generally. Except in the case of clover, which was sometimes raised,[20] the haying season began about the first of July and extended for about a month, depending partly on the advancement of the season and the amount of rain. The last part of the haying, usually in September, was the harvesting of the rowen. This is a term which is very uncommon in American agricultural terminology. It was applied to a second crop of hay from grass normally cut but once a season. An account of the end of haying on August 23, 1842 mentions four loads of rowen. There is an occasional reference to a rowen pasture, but whether it refers to a pasture of a hay stubblefield or tall grass standing in a lightly grazed pasture is not clear.[21]

A series of entries in the records of the Shakers

[16] Bennet-Crouch Journal, May 25, 1799; Nicholas Bennet Journal, no. 1, pt. 1, June 13, 1803, and (1814–1833), June 14, 1819, May 21, 1825; Joseph Bennett Journal, v. 2, May 6, 1793; Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, June 4, 1834, June 14, 1836, July 1, 1842, Sept. 21, 1845; Journal of Aaron D. Bill, 1834–1840, June 7, 1834, June 5, 1835; New Lebanon Records, Betsy Crosman, May 26, 1862; Hervey Elkins, *Fifteen Years in the Senior Order of Shakers* (Hanover, N. H., 1853), mentions greatly improved sheep of French origin.

[17] Journal of Aaron D. Bill, 1834–1840, May 5, 1835; Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, Sept. 21, 1835.

[18] Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, July 25, 1837; Isaac Young's Domestic Journal, v. 9, July 15, 1861, July 14, 1869; *Manifesto*, 20:49 (March 1890).

[19] Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, July 18, 1842; Isaac Young's Domestic Journal, v. 9, supp., July 18, 1862; *Manifesto*, 20:49 (March 1890).

[20] Giles B. Avery, A Journal of Events, 1838–1847 (Mt. Lebanon), June 21, 1841; Enfield, Conn., Farmers Daily Record, 1850–1852, July 1–10, 1850.

[21] Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, Sept. 9, 1837; Giles B. Avery, A Journal of Events, 1838–1847, Aug. 22, 23, 24, 1842. The Enfield, Conn., Farmers Daily Record refers to mowing in the rowen pasture and to "the English part of the rowen pasture." July 12, 13, 1850, July 12, 23, 1851.

at Harvard, Massachusetts, throw some light on their procedures. One, in 1848, speaks of making a "one horse hay rigging," a somewhat ambiguous term. Again, in 1851, on June 28, "Haying is the greatest business. The clover in the Square Field is more than half mowed." On July 12, "Haying begins to be brisk [after much "dubious" weather]. The hired and home help are at it except the gardeners. Two large loads are put into the barn and 6 or 7 put in cock out." On July 16 the weather was again "dubious," but "what hay is fit to get in is immediately carted. Some mowing done. What is mowed in A. M. put in cock. A good deal of mowing done afternoon. . . ." The following day haying was brisk. "All is put in the barn but what was mown today." On the 19th, "The hired men mowed some thin grass and load the hay. . . . Afternoon clearer the brethren put the hay in cock that was mowed this A. M." On the 22d they wrote, "In this excellent hay weather but a small proportion of the hay needs opening and turning merely an upsetting the cocks from the Sun is sufficient which makes the work comparatively light. The hay is raked that was mowed yesterday, 9 loads." The next day was clear, and the mowing and carting went on. The following day was dull, and it was recorded that they "do some mowing but the weather looks so threatening that we hurry to get the hay in before noon and succeed in securing it all tho some of it was not entirely fit. Rain comes near us, some sprinkling here. Hay makers scatter in different ways P M for past time." And so the haying probably went in most of the communities and during most seasons.[22]

It must not be inferred from this seeming emphasis upon livestock and haying that the other aspects of farming were neglected. Potatoes were important from the beginning, and in 1791 they raised 3,670 bushels and in 1842, 2,400 bushels. In that year they were experimenting with Scotch-Downs potatoes imported from Scotland.[23] Flax was grown both for seed and fiber.[24] Buckwheat to the amount of 300 bushels was raised in 1791.[25] Corn was raised from the beginning but was not a major crop. In 1816 they were hauling corn from Hudson to feed their livestock.[26]

Like their neighbors the Shakers found that they could not compete with the Mohawk Valley and the Genesee country in producing wheat, so that crop is not prominent. In 1802 they got wheat from their neighboring Shaker community at Watervliet. On February 21, 1815 they went to Albany with sleighs to get wheat, and on July 16, 1816 they hauled 300 bushels of wheat and 12 barrels of flour from Hudson. An entry dated January 21, 1821 states that they took in "about 300 bushels of wheat this week." In 1834 they threshed 85 bushels of wheat and in 1837 raised 40 bushels on 1¼ acres.[27]

In one of their journals there appears for October 21, 1839 a significant entry regarding wheat.[28] The chronicler recorded that "all the teams of oxen and all that can be rallied in the church start early for Albany to bring in the wheat that Charles bought up west there has been 1080 bushels arrived in Greenbank by way of the canal." It was noted the next day that all the teams except one yoke of oxen had returned. They had apparently raised only 52 bushels of wheat in the preceding year and had a crop of only 180 bushels on 15 acres in 1839. Late in 1842 they hauled 200 bushels of wheat from the railroad for the use of

[22] Harvard, Mass., Journal, 1847–1851. An unusual entry in the Enfield, Conn., Farmers Daily Record, July 13, 1850, speaks of "poling out the Talcot meadow and got in 7 loads," evidently a reference to the practice used elsewhere of drawing hay cocks by use of a horse, a rope, and a pole which was placed at the base of the cock and made secure with a second rope.

[23] Nicholas Bennet Journal, v. 2, Oct. 20, 1791; Mt. Lebanon, Society of Believers, Domestic Journal, Oct. 17, 1842; Giles B. Avery, A Journal of Events, 1838–1847, May 9, 1842.

[24] Joseph Bennett Journal, v. 2, July 31, Sept. 26, Nov. 14, 1792, July 20, Aug. 15, 31, 1793; Nicholas Bennet Journal, v. 6, Aug. 30, 1817, Apr. 4, 1823, Sept. 17, 1824.

[25] Joseph Bennett Journal, v. 2, Oct. 17–29, 1791.

[26] *Ibid.*, Oct. 3, 1792; Nicholas Bennet Journal, 1814–1833, July 16, 22, 1816; Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, Oct. 21, 1835.

[27] Nicholas Bennet Journal, no. 1, pt. 1, Aug. 21, 1802, and (1814–1833), Feb. 21, 1815, July 16, 1816, June 21, 1821; Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, Jan. 25, 1834, Dec. 3, 1837.

[28] Journal of Aaron D. Bill, 1834–1840, Oct. 21, 22, 1839. Broom manufacture was common among the Shakers, but the Mt. Lebanon group appear to have raised little broomcorn. They raised crops in 1799 and 1802, however. Bennet-Crouch Journal, Oct. 3, 1799; Nicholas Bennet Journal, no. 1, pt. 1, June 16, 1802. Numerous references are made to raising root crops, rutabagas, turnips, beets, etc. Some tobacco was raised in the earlier period. Nicholas Bennet Journal, 1814–1833, Dec. 14, 1816.

the First Order.[29] These selected entries together tell the wheat story of the Mount Lebanon Shakers and, indeed, of most of their section.

A summary of the crops raised from 1848 to 1872, during which time a comparable compilation of statistics was recorded, will indicate the general spread of their farming operations during that period.[30] The potato crop varied widely from 200 bushels in 1851, to 900 bushels in 1862, and 1,256 bushels in 1852. Beginning in 1849 the successive crops were 850, 305, 200, 1,256, and 656 bushels. Part of these were raised to feed the cattle and others, not originally intended for feed, were so used in cases of surplus or impending spoilage. The barley crop ranged from nothing to 850 bushels (sold in part to a nearby brewery). Oats ranged from 100 to 860 bushels and corn from 380 to 1,000 bushels, all of which was used for feed for their livestock.

The mechanical equipment of their farm received but scant mention in detail, but one may assume generally that they were using the most advanced implements which had been well tested. In their reply to the New York State investigation they merely stated that their "implements for farming and gardening are mostly of kinds in common use, and only such as are necessary for these branches of business."[31] Reference has been made to their inspection of the Becle mowing machine. No specific mention of the reaper has been found in the early Mount Lebanon records, and they did record that they cradled rye as late as 1856.[32]

The Mount Lebanon Shakers are credited with making a threshing machine in 1815, but in December 1834 the farmers there were tramping barley and again in December of 1836 they were tramping "another flooring of barley and rak[ing] it out" and getting "down a flooring of oats."[33] In January 1836 they bought a threshing machine and set it up in one of the barns. They tried it out but since they had only one horse available they threshed but little the first day. In the succeeding days they put it in operation and recorded that after three or four days they had threshed 198 bushels of oats. By December 1837, the machine was working well except when the cogwheel came loose—a defect which caused much trouble. They could thresh 7 shocks of oats in 15 minutes. At one time they threshed 177 bushels of oats "in about a day," and on December 21 they finished "threshing oats with a great deal of pester & hindrance from the machine" and lent the horse power and threshing machine to the North family, which moved it home to thresh. But the "pester & hindrance" had become so annoying that, as the record states, Brother "Amos is about making a new thresher." This was finished by January 6, 1838. This was apparently not entirely satisfactory since they rebuilt it in November to gear it higher. When they next put it in operation they placed it on a scaffold with the fanning mill underneath. This arrangement worked very well, and the threshing and cleaning went on at the same time, as was the case with machines which Pitts had already made. Thereafter the thresher was well established among them. In 1842 they wrote of setting up the "threshing works," and in 1845 they borrowed horses from others in the Shaker community since their team was insufficient to run the machine (which was evidently driven by a sweep horsepower).[34]

The Shakers at Mount Lebanon appear to have followed the customs of the time in regard to plowing. They "broke" land with oxen and did ordinary plowing and fallowing with both oxen and horses. They plowed land in the fall and in the spring plowed it once, harrowed it twice, and sowed barley. Corn ground was plowed in the fall and twice in the spring. It was harrowed once and "brushed" with a brush that took 3 yoke of oxen to pull. It was then thought to be in proper condition for planting. In some cases the fields

[29] Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, Nov. 4, 1842.

[30] New Lebanon Records, Betsy Crosman, 1848–1872; Mt. Lebanon, Society of Believers, Domestic Journal, 1788–1877.

[31] New York State Senate, *Document 89*, Mar. 19, 1850, p. 7.

[32] New Lebanon Records, Betsy Crosman, 1848–1872, July 19, 1856.

[33] *Manifesto*, 20:50 (March 1890); Andrews, *The Community Industries of the Shakers*, 40; Anna White and Leila S. Taylor, *Shakerism* (Columbus, Ohio, 1904), 311; Journal of Aaron D. Bill, 1834–1840, Dec. 12–15, 1834, Dec. 16, 17, 19, 20, 21, 23, 24, 27, 28, 1836.

[34] Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, Jan. 2, 1836; Journal of Aaron D. Bill, 1834–1840, Dec. 15, 16, 19, 21, 28, 1837, Jan. 6, Nov. 8, Dec. 11, 1838; Giles B. Avery, A Journal of Events, 1838–1847, Dec. 14, 1838, Dec. 12, 1839, Jan. 17, Dec, 14, 18, 20, 1840, Aug. 29, Sept. 1, 1842, Dec. 2, 1845.

were ridged for planting corn. For the root crops they cross-plowed "very deep."[35]

It must not be supposed that these activities occupied the time of the larger part of the men of the community. Of the 62 men listed in the First and Second Orders on January 1, 1860, there were 6 given as farmers, 3 herdsmen, 7 teamsters, 4 gardeners, 1 harness mender, making a total of 21 who devoted themselves to farming and allied operations. In addition there were 28 boys whose work was chiefly on the farm. Some of the sisters did distinctly farm work while many more did work which would normally be done by the farm housewife of the time.[36] On occasion of rush work such as haying or grain harvesting all available hands turned out and some shops and activities would be closed for a time. This was facilitiated by the fact that nearly every adult male was quite conversant with almost all the tasks of the farm. This and the democratic spirit is evidenced by frequent shifts in duties in order to even the load and provide diversity. For example it was written on April 24, 1841 that "A change takes place today with the ox teamsters. Theophilus Sickles gives up driving & Felix Roberts takes his place. Phineas Gates leaves driving ox team & goes to the east barn to take care of the cows in place of Nathan Williams who goes to the garden to work & take care of the ministry's horses. Stephen Baker takes Phineas' oxen." Again on April 30 of that year, "Some change has been [made] among the teamsters. George Allen gives up 'Buck & Jim' & takes the colts formerly driven by John Dean. David Sickle takes Buck & Jim and will do the milling family choars, &c." Later on July 10 "John Dean resigned being foreman of the farm. Theophilus S[ickles, formerly an ox teamster] is appointed in his place."[37]

This account of the farming activity, particularly at Mount Lebanon, does not include two unique aspects of it, the raising and processing of herbs, and the raising, packaging, and distribution of garden seeds. Apart from lack of space, these two subjects in particular are notable among the Shaker communities generally and deserve a broad subject treatment rather than a limited local description.

[35] Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, Nov. 22, 1834, May 5, 21, 1836, May 28, 1838; Journal of Aaron D. Bill, 1834–1840, Sept. 12, 1837.

[36] Isaac Young's Domestic Journal, v. 9, Jan. 1, 1860.

[37] Mt. Lebanon, Society of Believers, Domestic Journal, v. 7, Apr. 24, 30, July 10, 1841, June 6, 1842.

# JEWISH AGRICULTURAL COLONIES IN THE UNITED STATES

LEO SHPALL

## BACKGROUND

*Early Proposals.* In 1783, there appeared an anonymous letter written supposedly by a German Jew and addressed to the President of the Congress of the United States. It includes a proposal to settle two thousand Jews on land. Recent investigations, however, prove that the letter was "really nothing more than an attempt by a Christian author to demonstrate to his fellow men the necessity of granting full emancipation to the Jews."[1] It is also claimed that the letter was never received by the Continental Congress or by any other branch of the American government.[2]

In 1819, William Davis Robinson printed and circulated a 40-page pamphlet in London entitled *Memoir Addressed to Persons of the Jewish Religion in Europe, on the Subject of Emigration to, and Settlement in, One of the Most Eligible Parts of the United States of North America.* The object of the pamphlet was to induce wealthy European Jews to create a fund for the purchase of a large tract of land in the upper Mississippi and Missouri territory and found an agricultural settlement for poor Jews. According to Robinson's plan, each immigrant was to receive a number of acres of land on credit. It also called for the transportation of the immigrants to their places of settlement, assistance in buying the necessary implements, and the establishment of rules governing the reimbursement of the capital. Robinson was confident that the investment would eventually prove of great advantage and magnitude. The

[1] Hans Lamm, "The So-Called 'Letter of a German Jew to the President of the Congress of the United States of America,' of 1783," American Jewish Historical Society, *Publications*, 37:171–184 (1947).

[2] *Ibid.*, 173; Max J. Kohler, "The German-Jewish Migration to America," *ibid.*, 9:93–94 (1901).

prevailing opinion was that the entire project was designed to induce English Jews to buy land through Robinson's mediation.[3] Recent investigations prove, however, that it was a sincere attempt, but it received no response.[4]

In 1820, Moses Elias Levy conceived a plan to establish an agricultural settlement in the United States, and he purchased a vast tract of land in Alachua County, Florida. He settled Jewish families from Delaware, New York, and New Jersey and some from Europe on the land and spent more than $18,000 building houses and supplying the settlers with agricultural implements. By 1823, more than fifty persons were settled on the land. Levy had agents publicizing the project and praising the fertility of the soil. The project, however, was short lived as many immigrants hesitated to settle there because of lack of proper accommodations.[5]

In 1824 the American Society for Meliorating the Condition of the Jews, a missionary organization, embarked upon a scheme to found a settlement for "agricultural and mechanical operations" on the part of its Jews. A committee prepared a plan, and it was voted to procure the amount of land deemed necessary for the purpose. According to the plan,[6] "a farm shall be stocked, and furnished with suitable implements of husbandry. The produce of the farm shall be considered common stock for the support of the different members of the settlement; and an experienced farmer shall be placed thereon to manage its concerns. All the members of the settlement are to be considered as a band of brethren, governed by the laws of our Divine Redeemer, and associated together for the purpose of aiding each other in the concerns of the life that now is, and of that which is to come. . . ." To this end the society rented a house with 3 acres of land in the vicinity of New York. This was to serve "as a place of reception for such Jews as may from time to time come to this country, where accommodations will be provided for them, as one family, at the expense of the Society; and whence, at their option, they may locate on our Agricultural Establishment, or engage elsewhere, in any employment under the auspices of the Board."

A year later the society leased a farm at Harrison in Westchester County, New York. Joseph Samuel Christian Frederick Frey, a baptized Jew, who had been active in missionary work in London and in the United States, was placed in charge of the farm.[7] The plan did not work out and was soon abandoned. In 1827 another farm was purchased, but it was sold at auction in 1835.[8]

To the same period also belongs the well-known project of Mordecai Manuel Noah to establish a City of Refuge for the Jews. Noah's scheme, like the former projects, failed, and now all that remains of the city is the cornerstone which is preserved in the Buffalo museum.

An actual settlement was attempted in 1837 by thirteen Jewish families, who founded an agricultural colony at Warwarsing in Ulster County, New York. They named the colony Shalom, meaning peace. The land was divided into lots of 5 acres each, and a site was selected for a village. Contracts were awarded to build houses at a cost of $400 each. The settlers requested the Congregation Anshe Chesed of New York to loan them a *Sefer Torah* (Scroll of the Law) until they could secure one from Europe, and they also asked for lamps for their synagogue. Thereupon, the trustees of Ansche Chesed decided to present lamps to them.[9]

The newcomers cleared the land and built roads. For five years they tried to make farming pay, but circumstances forced them to add to their earnings from the produce of the land by manufacturing and trading. Notwithstanding, the colony carried on. The climax, however, came when the factories in the neighborhood were shut down. After a few years of further struggling, the settlers found it impossible to continue. They sold their belongings in 1842 and moved away.[10]

In the same year, Henry Castro, a Texas pioneer, a descendant of a Marrano family, obtained a

[3] Charles P. Daly, *The Settlement of the Jews in North America* (New York, 1893), 92–96.

[4] See "An Invitation to America" in Lee M. Friedman, *Pilgrims in a New Land* (New York, 1948), 243–247.

[5] 18 Congress, 1 session, *Executive Document 156*, 343–345.

[6] American Society for Meliorating the Conditions of the Jews, *Second Report* (New York, 1824), 11–12,17.

[7] *Third Report* (New York, 1825).

[8] For a detailed account of the activities of Joseph Frey, see Lee M. Friedman, *Early American Jews* (Cambridge, Mass., 1934), 96–112.

[9] Hyman B. Grinstein, *The Rise of the Jewish Community of New York, 1654–1860* (Philadelphia, 1945), 119–122.

[10] For further details, see Gabriel Davidson, *Our Jewish Farmers and the Story of the Jewish Agricultural Society* (New York, 1943), 196–204.

five-year contract from President Sam Houston of Texas for the founding of an agricultural colony west of the Medina River. Carrying out his plans at his own expense, Castro secured colonists chiefly from the Rhenish provinces. They settled on the land and eventually turned the colony into a town which was named Castroville.[11] There is no evidence, however, that there were Jews among the first settlers of the colony.

In 1843, William Renau, then living in New York, started a movement for the establishment of a Jewish colonization society. He devoted all his energies toward the realization of his project and, therefore, traveled throughout the country propagandizing the idea and endeavoring to enlist the cooperation of American Jews. The society was finally organized, and its first meeting was held in New York. At that meeting Henry Meyer was appointed field agent and sent west to find a suitable place for a colony. He went to Chicago and selected a tract of land at Schaumberg in Cook County, Illinois. In his report to the society, Meyer urged the members to come to Chicago without hesitation. "Chicago," he wrote, "opens a vista into a large commercial future, and the land around it, which is flowing with milk and honey, is particularly adapted for the tillers of the soil." Most of the members went to Chicago, but after careful deliberation they decided not to settle as a body. Instead they carried out a plan of settling in villages where they combined farming with mercantile pursuits. As business conditions improved, they sold their farms and invested their money in real estate in Chicago.[12]

In April 1843, the Reverend Isaac Leeser, editor of the *Occident*, received a letter from Julius Stern,[13] a resident of Philadelphia, in which he stressed the necessity of settling Jews on land. "A considerable number of our people," he wrote, "has indeed come to this country, but without a common plan, without a fixed object to unite their interests; and everyone, therefore, was obliged to rely upon himself. As many had not learned a trade, and a few only understanding agriculture, commerce was the only resource which they had left, but most of them being without the necessary means to be merchants in the proper sense of the word, they were obliged to become itinerant traders or peddlars, a business most troublesome, and in the present scarcity of money most unproductive and most onerous." Stern was of the opinion that under these circumstances the Jewish settlers could not attain happiness. They must earn a respectable livelihood in the country which they adopted as their own. The way to attain that happiness was to turn to agriculture.

Stern, therefore, proposed the purchase of a vast tract of land in one of the Western States. "On this tract of land a number of dwellings might be immediately erected for those who are now occupied in agriculture, in a place which would form the centre of the first agricultural district. The farmers would, of course, live each on his farm." There the Jews would enjoy complete autonomy and prove "that their aptness and intelligence would produce also in this branch of human industry useful inventions and salutary improvements." Those who chose to follow commercial pursuits would be able to carry on their business with a better spirit and "occupy a more dignified position in the world than is possible under present circumstances."

Stern went further. He envisaged the eventual formation of a Jewish community with its own legislature and "the privilege of consecrating to the Lord, as it was in the flourishing times of our nation, every week a silent and holy Sabbath." He contended that "in such a society excellent men and worthy women might spring up, who would deserve to be called an ornament to Israel and an honour to mankind."

The Reverend Leeser endorsed Stern's plan in principle but opposed the idea of turning the agricultural colony into an autonomous community. He saw in the plan the formation of a state within a state but favored the promotion of Jewish communal activities by establishing educational and philanthropic institutions. The Stern plan received no popular support and ended in failure.

The immigration from Germany in 1848 opened a new chapter in the annals of American history. Many newcomers were anxious to settle on land, and among them were Jews. Some immigrants went west and bought farms there, while others settled in the existing agricultural colonies.[14] The desire to turn to agriculture became so strong among the

[11] Henry Cohen, "Henry Castro, Pioneer and Colonist," American Jewish Historical Society, *Publications*, 5:39–43 (1897).

[12] H. Eliassoff, "The Jews of Chicago," *ibid.*, 11:119 (1903); and B. Felsenthal, "On the History of the Jews in Chicago," *ibid.*, 2:22–23 (1894).

[13] *Occident* (Philadelphia), 1:28–32 (April 1843).

[14] *American Israelite* (Cincinnati, Ohio), 11:397 (June 10, 1864).

German-Jewish immigrants that the Jewish leaders in the United States proposed to establish colonies in Texas.[15] The Reverend Leeser used the columns of the *Occident* to further the idea and to rally American Jews to its support.

In 1852, Simon Berman, an immigrant from Galicia, arrived in New York, and the following year he tried to interest some of the leaders in a plan of settling Jews on land. Both the Reverend Leeser and the Reverend Dr. Morris Raphall of New York became interested in the project, but no concrete results were attained.

In 1855, a movement arose, chiefly among the members of the B'nai B'rith, with Dr. Sigmund Waterman at the head. A committee was formed to popularize the idea, and it issued a leaflet entitled *A Call To Establish a Hebrew Agricultural Society*.[16] The leaflet called attention to the fact that the various trades had already been monopolized in the United States and that mechanical arts had found few followers among the Jews. It emphasized that the nations of the world looked upon the Jews as "having neither the desire nor the capacity to settle upon the soil." They did so because Jews did not manifest an interest in agriculture. In order to correct the erroneous impression, the committee called upon the newcomers to turn to agriculture. By doing so, they would have the opportunity to earn a living and would not become a burden on charitable institutions.

The newly formed society promised to buy land to be cultivated by the colonists under the supervision of a competent manager. "Persons applying to be sent there must be of proper age and good character. They shall receive all the necessaries of life in consideration of their diligent and honest labors. They shall be well treated, used according to their capacities and be instructed in horticulture and agriculture theoretically and practically." A certain amount of the profits were to be applied to the building of houses, schools, and synagogues and to the purchase of the necessary supplies and implements.

At the meeting held at the Maimonides Library Association, 56 Orchard Street, New York City, the entire question was discussed. Dr. Morris Raphall was the principal speaker, and he favored the plan. One of the discussants, D. E. M. DeLara, objected to certain statements in the leaflet, particularly those that claimed the economic pursuits of Jews were one-sided. He saw nothing degrading in commercial pursuits, which, according to his opinion, are essential for the promotion of agriculture. This controversy between DeLara and Waterman was carried to the columns of the *Asmonean*.[17] Despite the criticism which the pamphlet elicited, the society made headway; officers were elected, with Dr. Waterman as president. The society hoped to build an agricultural school which would facilitate the settlement of Jews on land. The support, however, was half-hearted, and nothing further is recorded about the work of the association.

At that time the Reverend Leeser renewed his plea for the establishment of agricultural colonies. He envisioned a time when the Jews would be compelled to resort to other means of obtaining a livelihood in order to avoid competition and prejudice. He saw in the founding of agricultural colonies a way of combating anti-Semitism. If the newcomers were certain that "they would find land ready for the plough and shelter for their wives and little ones," they would be glad to settle on land. He was of the opinion that the founding of agricultural colonies would uplift the Jew spiritually. "All the things being equal, the Jew would reach that eminence in all branches to which he might turn his attention which he has attained in commerce. . . . If we could organize farms and colonies away from dense masses of large towns, we should have the satisfaction of seeing the industrious engaged in drawing their sustenance from the mother of all-living—our native earth."[18]

In 1860, Simon Berman again renewed his interest in the founding of agricultural colonies for Jews and published a detailed plan for colonization.[19] He suggested the establishment of a Jewish agricultural, industrial, and educational society, which would raise money for colonization by selling shares. The money thus raised would be spent for a partial payment on land, for the purchase of implements, and for the transportation and settlement of colonists. The society was to establish a model farm of 400 to 500 acres, where the colonists would become familiar with modern methods of agriculture. Berman further proposed to establish a school and to provide sound religious training for the children. He visited New York where he con-

[15] *Occident*, 3:562 (February 1845).

[16] Lyons' Scrapbook, 1:193, in the American Jewish Historical Society.

[17] *Asmonean* (New York), 12:45–46, 61–62 (May 25, June 8, 1855).

[18] *Occident*, 15:277–283 (September 1857).

[19] *Ibid.*, 17:25 (Mar. 8, 1860).

ferred with Dr. Raphall and Asher Kursheedt. Both promised their assistance by purchasing shares, but nothing seems to have materialized.

The early attempts to establish Jewish agricultural colonies in the United States ended in failure. Jewish public opinion in the country was not ready to support them, and the immigrants did not seem anxious to settle on land. The above projects, however, laid the groundwork for the efforts made in the latter part of the nineteenth century.

### JEWISH EMIGRATION FROM RUSSO-POLAND

Individual Jews began to leave Russo-Poland in the early part of the nineteenth century, and some of them settled in the United States. In the sixties, however, the economic status of the Jews became insecure, and this caused many to leave the country. Many young men emigrated to find a haven where they would be economically secure.[20] The immigrants came from towns situated near the Prussian border, where they had been waiting for an opportunity to go to the United States.[21] The Jewish communities of the German border towns organized committees to aid the emigrants and to facilitate their departure for the United States. In October 1869, a conference in Berlin, sponsored by the Alliance Israélite Universelle, organized the relief work and raised a substantial sum of money.[22]

*Attitude of the Jews in the United States.* Jewish opinion in the United States was divided. The *Jewish Messenger* opposed immigration. In an editorial entitled "After Immigration What?" the following questions were raised: Are the advocates of immigration aware of the gigantic enterprise? Are they prepared to assist the immigrants? The editorial contended that the advocates of immigration permitted their generosity "to outrun their prudence" and warned them that the consequences might be most trying.[23] On the other hand, Benjamin F. Peixotto, grandmaster of the B'nai B'rith and editor of the *Jewish Times*, strongly supported immigration and suggested the establishment of Jewish agricultural colonies where the immigrants might be settled.

In October 1864, Leon Strauss published a plan for colonization in the *Jewish Times*.[24] He based his arguments upon the premise that Jews arriving in the United States should settle on land in one of the Western States. A town should be established at a central point "wherein hundreds, yea thousands of mechanics, artisans, and manufacturers would find homes and a comfortable living." Strauss also suggested that the farms be leased to the immigrants for five years at a nominal rate and that the society furnish each settler with all the necessary implements. At the expiration of the term of the lease each settler "shall be entitled to purchase his farm for the amount of the original cost of the land improvement made by the society, with an additon of five percent interest for the whole time of the expired lease. . . . An adequate number of houses and other necessary buildings shall be erected in the town."

Strauss estimated that in the course of five years about fifty thousand Jewish families could be moved from Russia and settled on land. He also proposed that the society charter steamships and provide the necessary traveling expenses for the colonists. He estimated that a capital of $3,000,000, raised by subscription, would be sufficient to carry out his plan.

In pursuance of the publication of the plan a conference was held at San Francisco, and there plans were formulated to colonize the Russian Jews in the West.[25] In spite of constant warnings in the *Jewish Messenger*, the San Francisco committee sent $500 to the German committee as an initial sum for an emigration fund.[26]

*Attitude of the Jews in Europe.* In December 1869, Adolphe Crémieux, president of the Alliance Israélite Universelle, sent Peixotto an account of what had been done so far on behalf of the emigrants. The letter reads:

> You know the unhappy situation of the Israelites in the West of Russia. They have suffered all the horrors of famine for two long years. A good harvest has come. Famine has disappeared, but destitution still reigns. Thinking that it was our duty to ascertain its source, and to find the remedy for the evil, we have called together at Berlin all the members of the Alliance in Germany, and have organized committees for the relief of the Israelites in Russia. Two of our colleagues, Messrs. Levin and Lehman, then left for Lithuania and

[20] The Hebrew periodical, *Hamaggid* (Lyck, Germany), 11:308 (Feb. 12, 1868).

[21] *Ibid.*, 400.

[22] *Allgemeine Zeitung des Judenthums* (Leipzig), 33:840–841 (Oct. 19, 1869).

[23] *Jewish Messenger*, 13:4 (Oct. 15, 1869).

[24] *Jewish Times*, 1:5 (Oct. 18, 1869).

[25] *Allgemeine Zeitung des Judenthums*, 33:880–881 (Nov. 2, 1869).

[26] *Jewish Messenger*, 13:8 (Oct. 15, 1869).

Poland, and from all the information they have gathered, it appears that the destitution of the Israelites arises from ancient and deep-rooted causes. The gradual impoverishment of the country, following the Polish insurrection; the legal impossibility of owning estates; rendering agriculture inaccessible to the Jews; the absence of great manufactures; the diminution of commerce; a very burdensome system of public revenue; in fact, a complete code of restrictive laws have reduced to nothing all means of existence.

The Israelites are not even permitted to extricate themselves from such a deplorable situation by removing. The laws of the Empire render emigration to other countries, or the forming of new settlements in the interior of Russia, most difficult. The stringency of these laws has been weakened, but they have not been repealed, and they have been enforced long enough to keep a numerous population concentrated in a country without any resources. . . .

It is needless to show you all that Judaism can gain by aiding these to develop their energies in civilized and free countries. The wisest plan is, therefore, to aid the Jews of Russia to settle in Europe and America.

The Central Relief Committee, established at Koenigsberg, by our society, and composed of some of the most eminent men of the country, will preside over this great work. It will help our coreligionists to leave the country. But this is not enough; if left to themselves in the land to which they may emigrate, they would hardly find immediately the means of earning a livelihood. Your cooperation is therefore indispensable to the complete success of our undertaking . . . .We await your decision with the hope that it will be inspired by the thought of saving a whole people.

Providence has placed in our hands, and in yours, the preservation of this most unhappy population, and neither of us can fail in our duty.

Awaiting a speedy answer, we have the honor to express to you our highest regard, and to assure you of our most kindly feeling.[27]

*Proposals for Settling the Immigrants on Land.* In pursuance of the letter, Peixotto wrote to the *Jewish Times*, stressing the urgency of the appeal. In his opinion, Crémieux's letter indicated the way that American Jews could come to the assistance of their suffering brethren. Peixotto proposed to revive the American branch of the Alliance Israélite Universelle and select a central board in New York with cooperating agencies in Philadelphia, Baltimore, Cincinnati, New Orleans, Chicago, Saint Louis, and San Francisco. He spoke in high praise of the San Francisco committee and expressed his conviction that it would willingly cooperate.

"I should not hesitate," Peixotto wrote, "to call on the B'nai B'rith lodges to act. Let each lodge donate from the funds such amounts as it may be able to do. . . . Early in the spring, these young Hebrew refugees will be arriving in our shores. We must meet them and temporarily provide for them and set them on the way to labor."[28]

The Reverend Bernard Felsenthal of Chicago wrote in the Hebrew periodical, *Hamaggid*, that immigration to the United States should be encouraged. He suggested that immigrants be settled west of the Mississippi, in Iowa, Kansas, and Nebraska. He was anxious to see the immigrants carefully selected and only the capable ones settled on land.[29]

The board of delegates of American Israelites also opposed immigration, but it was forced to accede to the prevailing public opinion, which was strongly in favor of it. The board, therefore, instructed its secretary to inform Crémieux of its decision to forward money. It stipulated, however, that the immigrants must settle in the hitherto unoccupied regions of the West and Southwest. The board claimed that "immigration has been so steadily on the increase and so commonly of the pauper class that the charities of the large cities are overburdened."[30] Crémieux was, therefore, asked to discourage emigration except for those who were capable of becoming agriculturists.

Though without concrete results, the early attempts of Jewish colonization laid the foundation for future action later in the nineteenth century. The increase of immigration from Russia and other parts of Eastern Europe awakened in the Jewish leaders of the United States the awareness that something concrete must be done. The American Jews saw the need for an organization which would care for the immigrant and help him establish himself in the New World. One of the ways to solve the problem was the establishment of agricultural colonies.

### THE MASS MIGRATION IN THE EIGHTIES

On March 1, 1881, Czar Alexander II of Russia was assassinated, and Alexander III ascended the throne. The wave of anti-Semitism which had seemingly subsided during the reign of the late ruler again gained in vigor. Alexander III issued a call "to eradicate the hideous sedition and to

[27] *Ibid.*, 27(6):4–5 (Feb. 11, 1870).

[28] *Jewish Messenger*, 2:5 (Feb. 11, 1870).

[29] *Hamaggid*, 11:195–196 (June 24, 1868).

[30] *Jewish Times*, 2:5 (Feb. 11, 1870).

establish faith and morality." The influential Russian press, inspired by the government, incited the Christian masses against the Jews and, as a result, pogroms were staged in many Russian cities.

The perplexed Russian Jew saw only one way out—emigration. His attention was focused on South America, South Africa, and, above all, the United States. The Alliance Israélite Universelle of Paris, London, and Vienna canvassed possible outlets, and they concluded that the United States offered the broadest possibilities. Committees were formed, and the work was under the supervision of the Alliance Israélite Universelle and the Anglo-Jewish Association.

Refugees from Russia, most of them survivors of the pogrom in Yelisavetgrad, on April 15, 1881, began to arrive at the border town of Brody in Galicia, early the next month. A delegation of Russian Jews went to Vienna to confer with the representatives of the Alliance Israélite Universelle. Both the Vienna and Paris offices sent representatives to Russia to secure first-hand information about the atrocities.[31] The news that help was forthcoming spread among the Jews of the Russian Pale, and many moved to the border towns in hope that the committees would help them emigrate for the United States.[32] The Alliance sent Charles Netter to Brody to help regulate the emigration and to render assistance to emigrants. In a letter to the Alliance he wrote that up to November 1881 close to twelve hundred immigrants had left for the United States.[33]

*Organized Assistance in the United States.* The Jewish leaders in America were rather nonplused by the sudden influx, and they notified Charles Netter to check the flow of immigrants. The latter, however, realizing the danger in such action, asked that the decision be reconsidered. A compromise was finally reached by which immigration was to be stopped temporarily until those already in the United States found employment.

Emigration was the uppermost question in the minds of the Russian Jewry. The Jewish youth in general and the enlightened element saw in emigration a turning point in the life of the Russian Jew. They dreamed of a time when the Russian Jew would become free in the land of freedom.

A society known as the Am Olam (Eternal People) was formed with the aim of founding cooperative agricultural colonies.[34] The leaders of the society, Moses Herder and Manya Bakal, preached self-reliance and devotion to the cause. They appealed to their members not to rely upon the help of philanthropic agencies but to attain the goal through their own efforts.[35]

*Planning for Agricultural Colonization.* When the immigrants began to arrive in the United States, the Russian Relief Committee was organized with Judge Myer Isaacs as chairman. To prevent congestion in large cities, the committee planned to settle the immigrants on land. A conference estimated that $500 would suffice to support a family on land until the first crop was harvested. The members of the committee felt that the European organizations should share in the burden. Moritz Ellinger was delegated to visit the European centers and discuss the matter with the Jewish leaders there. At the same time the conference empowered Dr. Julius Goldman to go west and investigate opportunities for agricultural settlement. The conference also announced the organization of the Hebrew Emigrant Aid Society, and it adopted the following resolutions:

> We the members of the conference of representatives of Hebrew Societies throughout the United States, recognize the Hebrew Emigrant Aid Society of the United States, as now organized in the city of New York, as the parent society, and the proper organization for the reception, aid, support and distribution of Jewish refugees arriving in this country.
>
> While we recognize the fact that agricultural colonization is the best means of securing the future welfare of the refugees, it is apparent that the burden to be assumed in receiving, sheltering, temporarily maintaining and distributing the refugees, is of itself of such great magnitude and it will entail so much expense, that organizations now existing should not be called upon to perform the work of colonization upon any large scale.
>
> We suggest the propriety of the organization of one or more societies which shall devise and carry into operation a systematic plan of colonization to the United States and Canada, based upon commercial

[31] *Mitteilungen der Israelitischen Allianz zu Wien*, 1881, no. 4.

[32] The Russo-Jewish periodicals in Russian, *Razsviet* (St. Petersburg), 3:1655–1656 (Oct. 9, 1881); and *Voskhod* (St. Petersburg), 1:15–16 (September 1881), foreign news section.

[33] *Mitteilungen der Israelitischen Allianz zu Wien*, 1881, no. 4.

[34] Ab. Kahan, *Bletter vun Mein Leben* (New York, 1926), 2:17.

[35] The Russo-Jewish periodical in Russian, *Niedielnaya Khronika Voskhoda* (St. Petersburg), 1:357–361 (Mar. 26, 1882).

principles, and providing upon the security of the land settled for the repayment of all advances with their interest.[36]

Soon after the publication of the above resolutions a few agricultural societies were formed, the first with headquarters at 374 East Houston Street, New York.[37] In Cincinnati a society, founded for the promotion of agricultural pursuits among the Jews, issued an appeal "to aid the poor in Israel, so as to enable them to become tillers and owners of the soil, to live on broad fields, instead of living in crowded tenement houses."[38] Among the immigrant aid societies favoring colonization was the Philadelphia society which proposed to settle Jewish immigrants in Florida.[39]

In the meantime, Goldman returned from the West and submitted a report to the Hebrew Emigrant Aid Society which dealt with the following questions: 1. What qualifications are required for successful colonists? 2. What amount of capital is required to assure success in farming? 3. What locations in the Northwest would be most advantageous for placing the colonists? 4. What methods are the best and what principles are the soundest for a society whose object is the colonization of the Russian refugees?

Goldman's answers were as follows:

As to the first—It has been observed that of the refugees who have thus far landed in America, a great majority have expressed the desire to become farmers, but there can hardly be a doubt in the mind of any one who has spoken to these people upon the subject and studied their character that only a number are sincere in this desire and a still less number have a distinct idea of what farming is in this country—and more especially in the Northwest—really means. They who undertake to advise and direct the refugees in their efforts to become colonists, therefore, assume a grave responsibility, if we consider the serious consequences which might be entailed upon the refugees—perhaps a still greater responsibility if we consider the influence it would have upon the Hebrews upon their arrival.

As to the second—Probably no question which I put to the people from whom I obtained information received a greater diversity of replies than this one. It is like asking a merchant, what amount of capital do you require to be successful in mercantile pursuits? The merchant who began life as a peddler and a merchant who began with an inherited fortune will answer the question differently, although both may have achieved success. The former, by superior exertion, thrift, and intelligence, may soon have filled the gap existing between himself and the more fortunate competitor. The same observation is true respecting the business of farming. I shall submit to you a number of interviews with farmers who began agricultural life with very limited means or with nothing, and who today, after a few years' struggle, are comfortably situated. Yet, both classes consisted of hard workers and men of intelligence. Men of the former class did work which is not necessary for those of the latter to do, and, above all, they were economical to an extent of which the latter has no idea. . . .

As to the third—The localities in the United States where good and cheap land can be found are so numerous, it would be presumptuous to designate any one as the best. I can speak only of the lands I visited in the state of Minnesota and the Territory of Dakota. It is useless at this date to sound the praise of either that State or that Territory. The agricultural reports from both regions and the tide of immigration which is now, and for a number of years past has been, flowing into Minnesota and Dakota, speak in terms sufficiently eloquent of the advantages which their farming lands possess. . . .

As to the fourth—No colony should be organized on a communistic and cooperative plan, and the refugees should not be disposed of collectively, but individually. . . . Communistic colonies have succeeded in this country but in very few instances. . . . Colonization must be conducted strictly on business principles and not on charity. Many of the refugees already show the baseful influence which the receipt of charity invariably exerts upon man, and a large number are continuing to accept charity, and this takes away the respect of the individual.[40]

Goldman's report was accepted by the committee on investigation in principle and was submitted to the Hebrew Emigrant Aid Society for implementation. The matter was, however, postponed pending the return of Ellinger from Europe.

An ardent supporter of colonization was the *American Israelite*. It urged the establishment of Jewish agricultural colonies. The periodical contended that the immigrants must be settled in groups of not less than ten; the land must be carefully selected, and all implements should be owned in common by the colony, until the colonists were able to pay for the land granted to

[36] *American Hebrew* (New York), 11:44 (June 9, 1882).

[37] *Yiddische Volkzeitung* (New York), 52:74 (May 14, 1882).

[38] *Ibid.*, 350.

[39] *Ibid.*

[40] Hebrew Emigrant Aid Society of the United States, *Report on the Colonization of Russian Refugees in the West*, by Julius Goldman (New York, 1882), 2–6, 8–10.

them. "Send us funds," wrote the editor, "and you will be astonished how fast we will settle on government land every able-bodied Russian imigrant. We think that the long-deferred project of teaching our people agricultural pursuits can now be speedily realized, and the problem of what to do with the Russian can at once be solved."[41]

Simultaneously, a group of New York rabbis issued an appeal pleading the same cause.

> We say to you, never in the history of American Judaism has such an opportunity as this been afforded to promote the welfare of our brethren and the advancement of the best interests and the glory of our eminent faith. Here are the means to refute the oft-muttered calumny that our people are unfitted by habit, nature and sentiment for honest toil. Among those who have already come and are expected to follow there is a very large proportion of handicraftsmen, mechanics and farmers. In colonizing them and settling them as agriculturists, we feel, therefore, every moral assurance that they will become worthy American citizens repaying the protection and rights they here receive, by becoming faithful and loyal denizens of the soil, and forming a class of useful and honorable men who, adhering to their religious convictions, will also be imbued with the spirit of American institutions, contribute their full share toward the development of our country and the extension of its blessings, as freemen enjoying republican sturdiness and virtue. Recognizing that labor in the Jewish mind, teaching and character, and as they earn their bread by the sweat of their brow, it will not be 'the bread of affliction,' but a happy reward enabling them to attain independence and to take a fitting place in American citizenship.[42]

In the meantime, Ellinger visited the leading European Jewish communities to solicit their aid, and in April 1882 he attended a conference at Berlin, called to regulate emigration and to consider the problem of aid.[43] The representatives of the leading European Jewish communities agreed to give financial aid to the colonization project, and each organization was assigned a specific function. The Alliance Israélite Universelle agreed to direct emigration, while the Mansion House Committee in London was entrusted with selecting the emigrants and helping them go to the United States. When confronted with the actual task, these organizations found how difficult it was to carry out the plans that had been drafted. They were unable to check the tide, and not enough money was forthcoming.[44]

The suffering of the emigrants at the ports of embarkation was trying. They waited there for months, constantly besieging the local committees for help. In Brody, men, women, and children waited from six to eight months for help.[45] In many cases the police forced the emigrants to leave town, and these unfortunates were forced to go to Cracow.[46] This situation elicited criticism and condemnation from the emigrants and leaders of Russian Jewry. The emigrants charged that Ellinger, the representative of the Hebrew Emigrant Aid Society, made false promises that they would be settled on land. Later, however, he tried to sway Jewish public opinion in the United States against agricultural colonies.[47]

The leaders of the Hebrew Emigrant Aid Society were faced with tremendous difficulties, because the affiliated organizations in various communities were not contributing sufficient funds. In a letter to the editor of the *American Hebrew*, the president of the society openly accused those whose cooperation was not adequate. He contended that all plans formulated at the Berlin conference were doomed to failure if funds were not forthcoming. In detail he wrote:

> Over twenty-five hundred of our unfortunate brethren have been so far received by us, for twenty-one hundred of whom we have obtained employment or located satisfactorily. The remainder consists of merchants, clerks, students and unskilled laborers. We find it impossible to locate them at present, and they are still on our hands. The only practical solution of our difficulty is to form agricultural colonies of our coreligionists, and to do this from one to two millions of dollars are required.
>
> . . . How much money are they [the Union of American Hebrew Congregations] prepared to give for the purposes of colonization? We have already tried them. Appeals have been sent to every city and town in this country, graphically portraying the sufferings and necessities of our unfortunate brethren, but either

[41] *American Israelite*, 29:170 (Nov. 17, 1882). For this journal's attitude toward agriculture, see also *ibid.*, 28:237, 301 (Jan. 20, Mar. 17, 1882).

[42] *Yiddische Volkzeitung*, 52:4 (June 6, 1882).

[43] Moritz Ellinger, *Report on the European Conference on Emigration* (New York, 1887), 103–107.

[44] *American Hebrew*, 4:127 (Jan. 27, 1882).

[45] Eliezer Mashbir, "From Brody to New York," *Voskhod*, 2:45–50 (January 1882).

[46] The Hebrew periodical, *Hamelitz* (St. Petersburg), 18:23 (Jan. 26, 1882).

[47] *Russky Yevrei* (St. Petersburg), 4:722 (May 7, 1882).

lukewarmness or poverty has rendered our efforts useless. . . .

We sent Mr. Ellinger . . . to explain the nature of the movement and arouse our people to a common, united action. . . . We . . . desired simply that friends of the cause in other cities should form committees for the purpose of finding employment for as many as they could. . . .

A careful estimate shows that it will require five hundred dollars to colonize each family, therefore not less than one million dollars will answer our purpose to start with, and this amount is needed as soon as possible. . . .

If the Executive Board of the Union of American Hebrew Congregations will assume the entire responsibility we will . . . reinforce the sums already secured by subscription.[48]

This appeal did not bring the desired results. George Yates of the Mansion House Committee came to the United States, but no agreement was reached, and his committee decided to handle the emigration problem independently.

At this time, there came to the fore, Michael Heilprin, a man who assumed the leading role in the relief work for the Russian Jews. In March 1882, he founded the Montefiore Agricultural Aid Society, which was to help the immigrants found agricultural colonies. His unselfishness and idealism won for him the esteem and love of the immigrants. They found in him a benefactor who tried to understand the Russian Jew and his problems. It was through Heilprin's efforts that many of the agricultural colonies were founded in the eighties.

### THE AGRICULTURAL COLONIES

*The Sicily Island Colony.* The first agricultural colony of Russian Jews was founded under the leadership of Herman Rosenthal on Sicily Island, Catahoula Parish, Louisiana, in 1881. It comprised 35 families from Kiev and 25 from Yelisanetgrad. The colonists were recruited from four classes of immigrants. The first consisted of young idealists, professionals who looked upon colonization as an ideal. They wanted to show that Jews could be good farmers. The second class consisted of immigrants from southern and southwestern Russia who looked upon agriculture as a means of earning a livelihood. The rest of the immigrants had no definite aim and were largely influenced by the former two.[49] The colonists were not very enthusiastic about the choice of location. Louisiana was not known to most of the colonists, and the climatic conditions did not appeal to them. They, however, had no choice in the matter as the land was selected without their knowledge.[50]

The colonists raised $3,000 among themselves; they received an additional $1,800 from the New York committee, and the Alliance Israélite Universelle sent $2,800.

The New Orleans Jewish community was very enthusiastic about the project. On January 4, 1882, the *Times Democrat* of New Orleans published the following plan for colonization:

1. Having one or more colonial centers, the immigrants may be sent there at once on arrival, and be temporarily housed and fed at one-tenth of the cost that would be incurred in a large city, thus effecting considerable economy.
2. In the colony, the lazy and worthless can be distinguished from the industrious and good, and money need not be wasted on them. While they may be waiting in the cities no such distinction can be made.
3. The new arrivals at the colony can at once go to work aiding in the construction of their dwellings, etc., thus economizing what would have to be paid to outside workmen.
4. With a large colony the laboring many will produce sufficient to stimulate cooperative action on their part; to establish central factories and industries for their requirements.
5. With large numbers a more perfected system of agricultural, mechanical, and general education can be adopted for the instruction of the young of both sexes.
6. The progressive increase in the value of property in large colonies will offer the best guarantee for the repayment of all advances made to the colonists, and thus secure a commercial benefit to all who have contributed the means for this great work.[51]

The Jewish community of New Orleans supplied assistance in various ways. The movement was started by Alfred Montagu, who wrote to the secretary of the New York branch of the Alliance Israélite Universelle, offering in the name of Governor McEnery 160 acres of fertile land to each family. The letter was followed by a telegram from the governor substantiating the offer.

The Union of American Hebrew Congregations issued an appeal to the New Orleans Jewish community to render the needed assistance to the immigrants. A meeting was called, and through the

[48] *American Hebrew*, 9:124–125 (Jan. 27, 1882).

[49] G. Preis, [The Russian Jew in America] (St. Petersburg, 1893), 53–54. This book in Russian is a collection of articles originally printed in *Voskhod*.

[50] The Yiddish periodical, *Der Strahl* (Warsaw), 1:4 (August 1910).

[51] Quoted in *Jewish Messenger*, 51:2 (Jan. 6, 1882).

efforts of Rabbi James Koppel Gutheim of New Orleans a substantial sum of money was collected and forwarded to New York at once. At first it was agreed that the land offered by the governor would be accepted; later, however, the special investigating committee found that the land was not fertile, and it accepted the land offered by the Newman brothers in Catahoula Parish. There is a difference of opinion as to how the land came to be selected. Some of the colonists maintained that it was the voluntary choice of the investigating committee, while others claimed that the selection was forced upon the committee because of local politics.[52]

The New Orleans Agricultural Association, founded to aid and guide the colonists, seems to have sought the assistance of the Hebrew Emigrant Aid Society, and it even wanted to affiliate with it. Due to a misunderstanding such affiliation did not materialize. In reporting to the association, the secretary said: "It seemed that the committee in New York had only complaints to make as to the lukewarmness on the part of the New Orleans citizens in aiding the Russian emigrants, while the fact well known to the world, and acknowledged by the press, that New Orleans *alone* and no other had acted in as practical a manner in establishing the first agricultural colony, seemed to be ignored by our Northern confreres."[53] The secretary stated also that the offer of the New Orleans association to meet and discuss the matter was ignored. It, therefore, appointed a committee consisting of Rabbi Gutheim, Judge Morris Marks, and Julius Aroni to obtain a charter for the colony. After securing the charter, the committee appealed to the people of Louisiana to aid the project and contribute funds.[54] The response from both Jews and non-Jews was generous.

The group of immigrants finally left New York for New Orleans. After several days the men left their wives and children there and departed for the colony. Upon their arrival, the citizens of Catahoula Parish tendered the newcomers a cordial reception, and at a special meeting in Harrisburg resolutions were adopted formally welcoming the colonists and assuring them protection and cooperation.

The colonists divided in groups and set to work. A German farmer was employed as advisor. The colonists were quartered in three big houses, but as the dwellings were found unsuitable, the New Orleans Jewish community built twelve others. The colonists worked hard and anticipated good results, and in appreciation of the cooperation shown by the New Orleans Jewish community the colonists wrote a letter of thanks to the president of the New Orleans association.

An editorial in the *American Hebrew* commended a report of the president of the Hebrew Emigrant Aid Society in which he had expressed great satisfaction over the establishment of the colony. In it he said: "Whenever we consider the magnitude that Russian immigration is likely to assume, the successful establishment of this colony will be an event of the utmost importance to our race, and practically solve the problem of how to humanely dispose of destitute thousands crying for aid."[55]

The work of the colonists progressed. They fenced the grounds and planted corn and vegetables; they cut down trees, planted fruit trees, repaired roads, dug wells, and built three two-room cottages. A governing board was elected, and a constitution was framed and adopted.[56] A report published in the *American Israelite* of March 24, 1882, praised the work of the colonists very highly. The colonists themselves were very optimistic, and some of them wrote to their friends in Russia urging them to select Louisiana as their new home.

With the approach of spring, however, things turned for the worse. The colonists began to complain of the heat; they were disappointed that their wives could not join them; malaria began its ravages; and to top it all the Mississippi River rose and swept away practically everything. The New Orleans community was willing to continue its aid, but the colonists were discouraged.

Most of the colonists scattered, abandoning everything they had left to take up peddling and

[52] Davidson, *Our Jewish Farmers*, 205. His account is based exclusively on interviews with former colonists.

[53] *Jewish Messenger*, 51(3):3 (Jan. 20, 1882).

[54] Hebrew Emigrant Aid Society, *Annual Report, 1882*, 1–5, for the full text of the appeal. See also Leo Shpall, "A Jewish Agricultural Colony in Louisiana," *Louisiana Historical Quarterly*, 20:821–831 (1937). The report and the article also contain the Harrisburg resolutions and the letter of thanks to the New Orleans association referred to in the next two paragraphs.

[55] *American Hebrew*, 9:98–100 (Jan. 13, 1882).

[56] For the constitution, see the article cited in note 54. For a Russian translation, see *Voskhod*, 2:45–50 (January 1882), and *Russky Yevrei*, 4:273–274 (Feb. 12, 1882).

factory work. Some of the colonists, however, did not lose courage. Their failure in Louisiana strengthened their determination to begin anew, and under the leadership of Herman Rosenthal they left for South Dakota where they founded a new colony. This, in brief, is the story of Sicily Island.

There is, however, a somewhat different picture depicted in articles and letters from the colonists published in the Russo-Jewish press. These accounts unfold a story of great courage manifested by the colonists, who came on the land to become agriculturists but did not get the necessary cooperation. The accounts charge that the philanthropists failed to understand the aspirations of the immigrants. The Russian Jew wanted to show that he was capable of becoming a successful farmer. The colonists had an active social life, they issued a weekly bulletin, and gathered for debates and discussions.[57] To give a clear picture of the experiences of the colonists a letter addressed to friends in Russia by an immigrant who settled at Sicily Island is here quoted.

> The heading of the stationery will prove to you that our dream has become a reality. Although the work has just begun and not all the colonists have arrived, the colony is a *fait accompli* with a constitution ratified by the membership and ratified by the State.
>
> I would like to omit some of the facts leading to the founding of the colony but I feel that some of them should be revealed.
>
> Our group came to Brody, and there, the representative of the Alliance assured us that they and the New York committee would help us in establishing ourselves in the colony. Encouraged by these assurances, we departed for New York, but there we met with total disappointment. The committee looked upon us as paupers and refused to listen to suggestions. We asked to be sent to Kansas, but they sent us to Louisiana.
>
> The reception in New Orleans was very cordial. We were placed in two hotels, and the local committee invited two of our representatives to take part in the formulation of future plans. The members took part in the deliberations and offered some suggestions which were accepted by the committee. They were willing to cooperate, but could not realize the plan because the New York committee failed to send the money it had promised. The local chairman resigned in protest and was succeeded by Mr. Weiss.
>
> The newly elected chairman suggested that two of our men go to Sicily Island and get acquainted with conditions there. Upon their return, our men informed us that the land had not been cleared, that the climate is semitropical, but they were of the opinion that the soil, if properly cultivated, would prove fertile for the raising of cotton and vegetables.
>
> We left for the colony with high hopes, but after having spent a few months there, we found conditions unbearable. The heat affected most of the colonists, and malaria has stricken the women and children. We are, however, still hopeful and are full of expectations for a glorious future.[58]

A few months elapsed and with the approach of spring things began to change for the worse. They were disappointed that their wives and children could not join them; they complained of the heat and lack of drinking water; and they were discouraged by the uniform failure of the farmers around them. In April of that year the Mississippi River rose, breaking the levees and flooding the land. The rest of the colonists scattered, abandoning their investments which had severely reduced their savings.[59]

The secretary of the colony attributed the failure not only to the unfavorable climatic conditions and the infertile soil, but also to the absence of a Jewish community nearby. They could not live isolated from Jewish cultural and religious life. He claimed that under these circumstances the colonists could not stay. In a letter to his friends in Russia, he wrote: "The aim of the first colonists was to do pioneering work. We wanted to pave the way for those who would join us or establish agricultural colonies elsewhere. We wanted to show them what we have accomplished, so as to make it easier for others. We wanted to show them how to become successful farmers. This, however, we could not do under the existing conditions."[60]

In spite of the failure, Herman Rosenthal, the leader of the colony, maintained that the establishment of agricultural colonies would help solve the perplexing Jewish question. He wanted to see about a half a million Jewish agriculturists who would derive their livelihood from the produce of the land.[61] One writer on the subject concluded his account with the following fitting statement: "In truth, this epic can best be summed up in the impressive words of one of the members:

[57] For accounts on the above, see *Russky Yevrei*, 4:270–271 (Feb. 12, 1882).

[58] *Niedielnaya Khronika Voskhoda*, 1:124–128 (Feb, 5, 1882). For more details on the life of the colonists see *ibid.*, 1:1163–1165 (Oct. 2, 1882).

[59] *Hamelitz*, 19:1323 (1883).

[60] *Der Strahl*, 1:3 (Aug. 12, 1910).

[61] *Hamelitz*, 19:86 (Jan. 15, 1883).

'Work—mostly useless, hope, despair, love, song, poetry, happiness and misery—life as we lived it there in Louisiana.' "[62]

*Bethlehem Yehudah.* In September 1882, twelve young men who were members of the Kremenchug party of Am Olam arrived in South Dakota from New York with the intention of founding an agricultural colony based on cooperative principles. They settled on government land and named their colony Bethlehem Yehudah. A few months later twenty more colonists arrived.

At the outset some of the colonists sought employment in the neighborhood to provide additional funds for the colony. The young men were not afraid of hard work and were ready to face privations, believing in ultimate success.[63] A letter by one of the group, S. Sokolofsky, to friends in Russia expressed a great deal of optimism and spoke very highly of the enthusiasm manifested by his fellow colonists.[64] He reported that although the colonists had decided to begin cultivating only 100 acres of land, their optimism ran so high that they were formulating plans for the founding of another colony. "When all the preliminary plans have been completed," wrote Sokolofsky, in another letter, "we will ask our friends from Russia to come here, to our newly founded settlement, and both colonies will form one commune. Slowly but surely we are arriving at the realization of our aim. We must train our youth to become productive and self-reliant agriculturists. If the Russo-Jewish capitalists forget their brothers, the Jewish youth must not forget its people."[65]

In another article, Sokolofsky wrote that some of the colonists lived on a communistic basis, while others depended on cooperation. The colonists elected a governing board and adopted the following constitution and bylaws, written in the Russian language.

Preamble. The colony, Bethlehem Yehudah, was founded by the first Kremenchug Am Olam group, known as "The Sons of Freedom." The group aims to establish a model colony for those who, in the future, may wish to found similar agricultural colonies. The group also aims to help in the liberation of the Jews from economic and spiritual bondage, so as to bring them justice, freedom, and peace. It aims to prove that the Jews, like other groups, are capable of becoming agriculturists.

With these aims in mind, we, the members of the Kremenchug group, have adopted the following constitution:

1. The chief occupation of the members of the colony, Bethlehem Yehudah, is agriculture. Members are permitted to seek other employment only after the farming season is over. No member is allowed to pursue any commercial pursuits.

2. All members constitute one family possessing equal rights and privileges.

3. The income is to be divided into three equal parts to be used (a) for the maintenance of the colony; (b) for expansion; (c) for the establishment of a colonization fund.

4. It is the duty of each member to assist in the founding of other agricultural colonies.

5. Any other colony founded through the initiative and efforts of Bethlehem Yehudah must be governed by the same rules and guided by the same principles, and thus become a part of one commune.

6. The amount to be invested in the colonization fund is to be determined annually by the Governing Board. This allocation is to be made after the harvest.

Internal Government. 7. The Governing Board consists of the President, a Vice President, and a Justice.

8. The Board is elected for a 5-year period. At the expiration of the term, the land will become the common property of the colonists.

9. The executive powers are vested in the President and Vice President. They are the official representatives of the colony; they make all agreements and draw all contracts and appoint the general manager of the colony.

10. The President has the veto power over all decisions of the membership.

11. All controversies are referred to the justice for settlement.

12. No member is expelled or elected without the consent of the President and a two-thirds vote of the membership.

13. A three-fourths vote of the membership is required to amend the constitution, or alter any of the clauses.

14. A majority vote is required to introduce a new law.

15. Since the colony is founded on a cooperative basis all the crops will be divided equally between the membership.

16. The membership shall appoint a General Agent residing in Russia. He will act as the official representative of the colony and will keep in close touch with the Governing Board and render reports of his activities.

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[62] A. Peissokovitch, secretary of the colony, quoted in Davidson, *Our Jewish Farmers*, 207.

[63] Joseph Petrikofsky, *V. Ameriku* [To America] (Kiev, 1884), 219. See also the work in Yiddish, edited by E. Tcherikover, *History of the Jewish Labor Movements in the United States* (New York, 1945), 204.

[64] *Niedielnaya Khronika Voskhoda*, 2:204–207 (Feb. 27, 1883).

[65] *Ibid.*, 2:334–336 (Apr. 3, 1883).

17. When applications for membership are considered, preference is given to relatives of the original settlers who are considered charter members and to colonists recommended by the General Agent.

18. The signatories of this constitution automatically became members of the colony.[66]

As stated in their constitution, the colonists aimed to establish a model for a new social order, and they believed that it could be done. Their system and method of approach apparently brought criticism, because Sokolofsky deemed it necessary to defend the colony's policies and program in a special article written in Russian. He criticized the attitude of the American Jewish philanthropists, and appealed to the Jews of Russia to support the colony.[67]

The colonists worked hard, and during the winter of 1883–84 some of them sought employment in the nearby communities, leaving others to prepare for the spring. The colonists did not neglect their social and cultural life. They gathered practically every evening for discussions, dances, and entertainment, and they published a Russian newspaper.

In 1884 the colonists cultivated 165 acres. A report states that "if under existing unfavorable conditions the colony attained its goal, there is no doubt that under more favorable conditions the colonists will accomplish much more. We must go on. . . . We must familiarize ourselves with the work more thoroughly, and we must complete our task."[68]

Conditions unfortunately turned for the worse. The harvest did not bring the expected results, and no additional funds were forthcoming. The colonists dispersed. Some went to New York, while others bought farms. Even Sokolofsky had to admit that the entire project remained a mere experiment. He concluded "that a cooperative colony can function as long as the members are in need of mututal aid. When conditions, however, begin to improve, each colonist wants to become independent."[69] The colony was finally liquidated in 1885.

*Crémieux.* The colony adjoining Bethlehem Yehudah was founded by Herman Rosenthal after the liquidation of the colony on Sicily Island. With the assistance of Michael Heilprin, Rosenthal and his friend, Benoir Greenberg, purchased land at Mitchell in Dakota Territory, while the other colonists settled on government land. The colony was named in honor of Adolphe Crémieux, president of the Alliance Israélite Universelle. Unlike Bethlehem Yehudah, Crémieux was not founded on cooperative principles, and each colonist lived on his own farm.[70]

When all preliminary arrangements were completed, some colonists went to Milwaukee, where they bought some agricultural implements and lumber. They built houses and set to work. They encountered difficulties at the outset. Water had to be carted a distance of 4 miles. Some colonists attempted to dig wells, and they were forced to excavate about 50 feet before reaching the water level.[71] A prairie fire destroyed some of the available hay, yet they were not discouraged and sought the assistance of their neighbors. The first winter was severe, and one of the survivors recalled that "some of the colonists used ropes, one end fastened to the door post and the other end tied around the body, to prevent losing themselves in the blinding sheets of ice and snow."[72] In the spring of 1883 they planted crops, and although the harvest did not bring the expected results, the colonists were not discouraged and looked hopefully forward, because they realized some money.

Like their friends of Bethlehem Yehudah, they led an active social life. Meetings, parties, and entertainments were held in various houses. The colony had its own theatrical group that staged plays from time to time and a chorus.[73]

The enthusiasm of the colonists found an echo in the Russo-Jewish press. They believed that the divine spark which had kept Israel alive for centuries would also kindle in the hearts of the colonists. They expected to show the world that the Jew can live from the produce of mother earth.[74]

Constant reverses, however, were too much to withstand. The creditors refused to give them any consideration, and most of the colonists moved away and settled in other communities.

*New Odessa.* The colony, New Odessa, in Oregon was composed of members of the Am Olam group

[66] *Ibid.*, 2:125–126 (Feb. 6, 1883).
[67] *Ibid.*, 3:570–573 (May 20, 1884).
[68] *Russky Yevrei*, 5:25–26 (June 19, 1884).
[69] *Niedielnaya Khronika Voskhoda*, 4:20 (Feb. 19, 1885).
[70] *Russky Yevrei*, 5:24–25 (July 13, 1884).
[71] *Ibid.*, 4:746–747 (July 17, 1883).
[72] Davidson, *Our Jewish Farmers*, 218-219.
[73] *Russky Yevrei*, Nov. 18, 1883, p. 25–27.
[74] *Ibid.*, Jan. 13, 1884, p. 20–21.

who came to the United States chiefly from Odessa. Imbued with socialist ideology, they set out to establish a model colony based on socialistic principles.[75]

Upon their arrival in 1882, they had no funds and were, therefore, compelled to seek employment in New York. The immigrants contacted Michael Heilprin and Jacob Schiff, laid their plans before them, and succeeded in securing their cooperation. Heilprin became vitally interested in this group and devoted a great deal of his time, often at the expense of his health, to win public support for their enterprise. "It was no light task," he wrote, "to collect means for this object at a time when every day brought into our port vessels with refugees, whose hunger and want of shelter pressed every claim upon public charity into the background. We had also to contend with anti-Russian prejudice, an outgrowth of ignorance and self-over-estimation kindred to anti-Semitism." Heilprin finally managed to overcome the obstacles. He succeeded in persuading some leading Jews to come to their assistance and collected enough money for the purchase of land and the transportation of the colonists.[76]

The colonists realized that preliminary farm training was essential. They, therefore, spent several months on farms, and there they became acquainted with modern methods of farming. In the meantime the group sent their representatives to the Midwest, Washington, and Oregon, to choose land. The group finally decided upon a tract in Douglas County, Oregon, where they purchased 760 acres.

In July 1882, the first party left for the colony, and, in the spring of 1883, twenty-five other colonists joined them. The colonists planted wheat and a variety of vegetables. The land was fertile, and the first harvest proved promising. A letter dated November 1 from a colonist gives a clear picture of their work and their preparations for it.

> Our Society, "Friends of New Odessa," consists of young people between the ages of twenty and thirty. We are all from Odessa and our group consists of seventy members. Last summer we worked on farms near Hartford, Connecticut, and there we familiarized ourselves with the latest methods in agriculture. I can say, in all sincerity, that we have established for ourselves a good reputation for our diligence and integrity. Some of our members succeeded in procuring the aid of leading New York Jewish philanthropists who also promised their fullest cooperation. Above all they assured us of complete autonomy in conducting our internal affairs. We selected the state of Oregon because of its temperate climate and fertile soil.[77]

Upon the arrival of the colonists a large building was erected, where they were temporarily housed. The leading spirit in the colony was a non-Jew, William Frey, formerly professor of mathematics in the Military Academy at Saint Petersburg. The colonists worked out a regular daily routine. They had regular working hours and devoted the evenings to study, discussion, and recreation.

> This colony was unique in the type of life that prevailed. . . . The colonists lived under a strict regime. Rigid regulations were in force. Everybody worked. . . . There were fixed hours of labor and assigned tasks not only on the farm and in the forest, but also in the kitchen and about the house. . . . Their theory of life forbade them to 'gorge' themselves when there were people on this earth suffering from want and hunger. . . . Imbued with the loftiness of their ideals these youthful 'intelligentsia' did their work . . . with joy in their hearts and songs on their lips.[78]

For two years harmony prevailed, and the colonists were happy. The colony consisted of two separate units, the family and the commune. The land was the common possession of the commune, each family contributing toward its cultivation, their motto being "one for all, all for one." One of the colonists reported as follows:

> The arrival of all our brothers and sisters in the colony and the fulfillment of our contract with the railroad company to deliver a definite amount of lumber are two of the most outstanding events in our life. We are beginning a new life, which gives us an opportunity to develop spiritually, mentally and physically.
>
> Immediately upon our arrival, we began to work. Notwithstanding the privations and inconveniences we carried on. Every day we completed our regular assignment of our lumber delivery. We live under no false illusions, but we hope to pay off in time our debts and enjoy life in a free and wholesome atmosphere.[79]

According to one student of the group, the lumber contract saved the colonists from early failure.

[75] Petrikofsky, *V. Ameriku*, 217. See also *History of Jewish Labor Movements*, 2:231.

[76] Gustav Pollak, *Michael Heilprin and His Sons* (New York, 1912), 208–209.

[77] *History of Jewish Labor Movements*, 2:232.

[78] Davidson, *Our Jewish Farmers*, 231–232.

[79] *History of Jewish Labor Movements*, 2:33.

He further asserted that at the expiration of the contract, the financial condition of the colony became insecure and hastened its disintegration.[80]

The constitution framed by the colonists included the following provisions: 1. No colonist could have work outside the colony. 2. No colonist could engage in any form of commerce except the sale of the colony's products. 3. A special fund was to be set aside to aid new colonists. 4. Each family had full autonomy in the management of its internal affairs. 5. The work in the colony was to be distributed according to individual abilities. 6. Men and women were to enjoy equal rights. 7. Any member of the colony who attained his eighteenth birthday was eligible to vote, and anyone reaching the seventeenth birthday was eligible to take part in the deliberations of the commune. 8. New members had to pass a probationary period of one year. 9. Upon his failure to pass the probationary period, the new member was required to leave the colony, and his share in the crop was given to him. 10. All problems pertaining to the colony were to be settled by the meeting of the membership of the colony.[81]

New Odessa attracted wide attention, and many observers visited the colony. Opinions varied; some were sympathetic and admired their accomplishments, while others expressed displeasure at their outlook on life and their policies. One of their severest critics was the Reverend Dr. J. Wechsler of St. Paul. While admiring their diligence, sincerity, and integrity, he severely criticized their conduct. In a letter to the editor of the *American Israelite*, he said:

> I made it my duty to visit the Oregon Colony on my recent visit to the Pacific coast. . . . When we arrived at the colony I retired for the night. . . . In the morning I had occasion to admire the beautiful situation of the large and extensive farm upon which the settlers are located. . . . The colony consists of about forty souls. . . . There is . . . not land enough to support the present number which besides, . . . is to be increased yet, as but the fourth part of the farm can be cultivated. . . . The settlers have now about one hundred acres in cultivation, and had a very prosperous harvest. . . . This will be nearly enough to support them a whole year. . . . If it were not for their communistic and religious ideas, . . . these colonists would have a prosperous future in store, for they are all very industrious and are willing to do any kind of work which is required. . . . They live together in the greatest harmony, and if one did not understand human nature and what often follows, one could but desire that it would remain always so. . . . I must give them great credit for their cleanliness and neatness, which are perceptible everywhere. . . . They have a noble desire to advance in knowledge, hence one corrects and instructs the other in a praiseworthy manner. . . . I questioned them regarding their religious views and practices. I am sorry to say that I was sadly disappointed. . . . I reasoned with them to show them the absurdity of such a course of life, and urged that our blessed Judaism was the only foundation upon which their future happiness can be permanently secured, but it seemed to me that I made no lasting impression to convince them of their folly. . . . I regret exceedingly that this otherwise intelligent community holds not steadfast to the principles which are generally accepted, and are led astray by many views which sooner or later will be an obstacle in their way to promote their welfare.[82]

An editorial in the *American Israelite* also spoke of the Am Olam group and the New Odessa colony as a highly unsuccessful attempt. The work of the group was termed primitive and insufficient. "The improvements which they have added to the place are of the most limited character. . . . Their present interest as a society is to be found in the singularity of their social life. They have no religion, they have hardly a political organization for the management of their affairs and they have no definite code of morals."[83]

For four years the colonists worked indefatigably, but they only succeeded in cultivating one-third of the purchased land. Were it not for their deliveries of lumber to the neighboring companies, the colony would not have lasted that long. Another factor which hastened the disintegration was the internal conflict led by William Frey and his followers. In addition, a fire broke out destroying many of their buildings, including the library and the community house. The colonists dispersed. Some scattered throughout the west, and some returned to New York. The entire project remained a utopia.[84]

*Cotopaxi.* On May 5, 1882, twelve families were sent by the Hebrew Emigrant Aid Society to Cotopaxi, Colorado, and on May 12 they arrived

[80] Isaac M. Rubinow, *The Russian Jew in the United States* (St. Petersburg, 1907), 63.

[81] *Russky Yevrei*, 4:22–23 (Apr. 5, 1882).

[82] *American Israelite*, 31:4 (Oct. 3, 1884).

[83] *Ibid.*, 3; also quoted in *American Hebrew*, 20:132–133 (Oct. 10, 1884).

[84] Davidson, *Our Jewish Farmers*, 233.

at their destination.[85] It was the intention of the society to equip each family with a house and necessary implements. The management of the colony was entrusted to Julius Schwarz of New York, while Leon Tobias of Odessa was appointed his assistant; in the meantime E. H. Saltiel of Denver arrived in the colony and volunteered his services to work with Schwarz.[86]

At the outset the colony's affairs followed a normal course. Each colonist was given 160 acres, and it was agreed that part of this land was to be cultivated in common and the crop apportioned accordingly among the colonists. Forty acres were allotted to each colonist for common cultivation, and on this land potatoes were planted. The colonists were at first housed in log cabins, but later the committee ordered that houses be built.[87]

The immigrants worked hard and hoped to succeed in their efforts. In the words of Schwarz, "only one who knows what it means to break up virgin ground with a common shovel, can appreciate the industrious efforts of the refugees. They have broken up the ground with a shovel, they have done the hardest part of the work required to make a wagon bridge, they have filled the ditches with big rocks, which they were compelled to cut and hew from the mountains; they went up to their throats in the swift Arkansas River to make a foot bridge to enable them to reach their lands. . . . They carried lumber on their shoulders to speed the erection of their houses."[88] According to Schwarz, the colonists elicited praise from their neighbors, because they cultivated their farms as if they were trained farmers.

The colonists did not neglect the education of their children. They attended the public school in Cotopaxi, and arrangements were made by Schwarz to organize special English classes for the adults. The colonists held Friday night and Saturday services in the public school building, and through the efforts of the Reverend Dr. Herman Baar, superintendent of the Hebrew Orphan Asylum, presented the colonists with a scroll. Kosher meat and other products were imported from Denver. By December 1882, most of the houses were built, and satisfactory progress was made.[89]

The progress in Cotopaxi was impeded by internal conflicts which arose between Schwarz and Saltiel, who accused each other of mismanagement. This prompted the Hebrew Emigrant Aid Society to send its agent, Morris Tuska, to investigate the situation there. He spent some time in Cotopaxi, and, upon his return submitted to the society the following report:

> Immediately on arrival, I called on Julius Schwarz, the General Manager of the Colony, whom I found master of the situation, and who willingly gave me all the information required as to the doings of E. H. Saltiel, in whose care the colony was entrusted.
>
> The general condition of the colony is, considering the many difficulties that arose from the mismanagement of Saltiel and from his omission to furnish the colony with necessary funds, a favorable one.
>
> Owing to the indefatigable perseverance of Mr. Schwarz, who rendered himself worthy of the trust put in him, the refugees were settled on government land of one hundred and sixty acres for each family. . . . Mr. Schwarz told me that although there is no water for irrigation, he is confident that the farmers will in the winter be able to secure a supply of water to be used by next season. . . . Mr. Schwarz assured me that he repeatedly requested Mr. Saltiel to give him the means to sow a large quantity of potatoes, as they are saleable and greatly wanted, but Mr. Saltiel did not give him the funds required. . . . Had Mr. Saltiel used the money so readily put at his disposal for the purposes of the colony, . . . the colony not only would have been self-supporting, but been able to repay every cent that has been spent for their sake. As matters stand at present, the colonists will be able to pull through; they must, however, be provided with the necessary implements.
>
> The facts are that Mr. Saltiel used the money put in his hand for his own purpose, and left several bills unpaid, which he said were paid by him.[90]

This open accusation elicited an immediate reply from Saltiel. In it he categorically denied that conditions in the colony were gratifying. "I regret to state," he said, "that the farming experiment is a failure and if attempted further in the Far Western Mountain States, will cause both loss of money and great misery. The training and taste of our Russian coreligionists are against Western farming customs, and if the experiment should be repeated here, the only persons that will be bene-

[85] *American Hebrew*, 12:92 (Oct. 4, 1882).

[86] *Report of Julius Schwarz on the Colony of Russian Refugees in Cotopaxi, Colorado, 1882*, 4–5; *American Hebrew*, 12:92 (Oct. 4, 1882).

[87] *Russky Yevrei*, 4:1867 (Dec. 16, 1882); *American Hebrew*, 12:92 (Oct. 4, 1882).

[88] *Report of Julius Schwarz . . .*, 13.

[89] *Ibid.*, 16.

[90] *American Hebrew*, 12:92 (Oct. 4, 1882); *Jewish Messenger*, 52:2 (Oct. 6, 1882).

fitted will be the clerks and managers."[91] Both statements, however, give due credit to the colonists for their diligence and perseverence.

The controversy and the hardships that arose because of it prompted the Jewish community of Denver to call a special meeting. Both Saltiel and Schwarz were summoned to testify. At that meeting Saltiel stated that the land was not fertile, only 100 acres being fit for cultivation. He openly accused the Hebrew Emigrant Aid Society of complete indifference. The clothing and provisions were scant, and houses poorly constructed. The immigrants, he said, had contributed three times as much as the society.

Schwarz, on the other hand, persisted that conditions would have been normal had Saltiel not interfered. He accused Saltiel of building houses on land which did not belong to the colonists but to the Placer Mining Company. To substantiate his assertion, Schwarz submitted a statement from the mining company denying that Saltiel had leased the land.[92]

After careful deliberation, it was decided to delegate a committee to visit the colony and get firsthand information about conditions there. The members of the committee spent several days in the colony, and, upon their return, they praised the colonists for their accomplishments. They placed the blame upon the Hebrew Emigrant Aid Society for impeding their progress. It was their opinion that practical farmers and not clerks should be put in charge. They sent an urgent appeal for aid, but not enough was sent by the society to justify a marked improvement. Furthermore, lack of water for irrigation and the inability of the colonists to cope with the situation brought about the eventual liquidation of the colony.

*Painted Woods, Dakota Territory.* In 1882, twenty Jewish families were sent to Dakota Territory near the town of Bismarck. They were settled on government land, each family having a claim of 160 acres. As the settlement was established late in the season, they could raise little their first year. They built houses and broke some of the land in preparation for the coming season.[93] The general contention was that the land was fertile and cultivable.[94] In an appeal published in the *American Israelite* and the *American Hebrew*, Dr. Wechsler wrote: "Now as the spring approaches, it is my intention to extend the sphere of usefulness of their colony as time and circumstances suggest. Some of these refugees will be removed as they are not adapted for the new work, and their places will be filled by others who are better qualified for the purpose. . . . Now, however, the question is, shall our colony fully succeed? . . . I have done everything in my power, and now my co-religionists must help me to make the colony at Painted Woods a great success."[95]

In a letter to the editor of the *American Israelite*, Dr. Wechsler praised the colonists and envisaged a time when more colonists would be settled on land and more colonies would be founded in the West.[96] The colonists carried on in spite of difficulties and the havoc brought to the crops by a prairie fire. "It is now nearly a year," wrote Dr. Wechsler, "that the colony has been organized. . . . Our undertaking had been blessed with better results. The country is beautiful; a number of houses were erected so that the colony resembled a village. The men and women were busy at work and are hopeful for the best." Dr. Wechsler procured the active support of men like Jacob Schiff and Judge Nathan Isaacs, who helped him to collect more funds.[97]

In August 1884 Dr. Wechsler visited the colony, and in a letter to the *American Israelite* and the *American Hebrew* he gave the following description of his visit.

> Procuring a swift pair of horses and carriage and with a skillful driver . . . Mr. Metzger . . . who resides at Bismarck, . . . we arrived at the Colony. . . . Arriving at the house of a colonist, . . . we found that all had changed and that finally my instructions . . . had now been obeyed. . . . The colonists have settled in good earnest upon their own claims. . . . they have been industrious this season in tilling the ground. Of the forty settlers which form the colony, we have to report that they all have crops in cultivation—from five to thirty acres. . . . I have made comparisons, and find that the crops of the colonists compare favorably with those of their neighbors. They have all built houses upon their claims, and there is not the least indication that even a single one wishes to abandon his claim. The land is increasing in value, and in a few years more, when they will get a patent from the Government for their land, it will be worth a considerable sum, and I have no doubt

[91] *American Hebrew*, 12:132 (Oct. 27, 1882).
[92] *Ibid.*, 14:31 (Mar. 2, 1883).
[93] *American Israelite*, 29:302 (Mar. 9, 1883).
[94] *Jewish Messenger*, 53(21):4–5 (May 25, 1883).
[95] *American Israelite*, 29:302 (Mar. 9, 1883).
[96] *Jewish Messenger*, 53(21):5 (May 25, 1883).
[97] *American Israelite*, 29:388–389 (May 25, 1883), 30:132–133 (Oct. 16, 1884).

the most thrifty and persevering ones will become well-to-do farmers. It is a matter of fact that no better land for agricultural purposes can be found in any part of our country. There are, however, yet many difficulties to overcome.

Intellectually speaking, the settlers are of the most inferior class.[98] They possess not the least gratitude for all that has been done for them; do not co-operate together as they should, and are never satisfied, but press their claims as urgently as ever before for assistance,[99] yet it is a fact that no other colony has been as liberally assisted as this one. It must, however, be understood that the colonists are yet poor and in want, and as this will be the first crop to secure them a sustenance, I am in hopes that a majority of the settlers will become this year self-sustaining, and next year they will all get along well. Some assistance is needed yet to complete this great enterprise. . . . The settlers are all provided with cattle and the most necessary implements . . . but to satisfy their desires an outlay of thousands of dollars would be required to procure them the most approved machinery. That the colony will not prove a failure is absolutely certain. . . . No one can imagine the obstacles and difficulties that were in our way and are still not all surmounted, but I am sanguine of the best results, and the liberal committees who have contributed to sustain the colony will have the satisfaction to know that it will be shown to the world what can be accomplished to make these people self-sustaining.[100]

The situation of these people kept turning for the worse. During the winter of 1884–85 their losses were so heavy that there was much distress among the colonists. By the spring of 1885, only forty colonists were left.[101] Funds had been sent throught the winter to relieve their distress, and later $5,000 were furnished to provide seeds, additional implements, and horses and cattle; thus, about $20,000 had been spent by the beginning of 1886.[102] In that year crops failed, entailing much suffering during the ensuing winter.

On November 19 of that year, the colonists wrote a letter to the Immigrants' Agricultural Aid Society appealing for help.

We are gratified to see that there are still some of our co-religionists in this country whose sympathies are with us, in our effort to establish ourselves permanently in this free country, where no feeling of religious hatred is known to exist against us. Our unmerciful enemies across the ocean broadly proclaim that we are unwilling to do any kind of manual labor and live only on the products of others. Our aim is to prove to those anti-Semites that their statements are false fabrications of the vilest nature. We are willing to work and we do work hard whenever and wherever we are given a chance to do so. Much could be written upon this subject, but as we believe that we are acquainted with the history of the Jewish persecutions in Russia, we will say no more concerning the matter.

Ever since we settled in this country, we had to fight many difficulties—we have conquered most of them—and were on our way to prosperity, when a great misfortune happened to us, and our course is stopped entirely. Our crop this year proved to be a total failure. What little we have taken off our fields will barely be sufficient to pay the expense of harvesting. Owing to the fact that we had almost nothing when we settled here, we could save nothing for a rainy day till now, and consequently we have nothing to fall back upon. We hoped to be able to pay off our debts, which have become the greatest burden to us; we hoped to have enough to live on till the next year's crop, and also to have seed in sufficient quantities for next year. Now, the land having produced nothing, our hopes are entirely broken and starving threatens most of us. We are all men with large families, the sufferings of which will be impossible to witness.

On the face of these most deplorable facts, we have decided to invoke the aid of our more fortunate brethren. There is God in Israel, and we hope that the generosity of our benevolent brethren in this country will be aroused by our appeal for aid.[103]

Upon the receipt of this letter, the society appointed a committee to investigate conditions in the colony, but nothing came of it.

In 1887, the colonists having met with no more success, were obliged to give up and leave. From the reports of the colonists to their friends in Russia, it is evident that they were sorely disappointed. They expected to establish a Jewish settlement; they founded a synagogue and made all arrangements to provide their children with a sound Jewish and secular education. Unfortunate circumstances, as those mentioned above, caused the complete disintergration of the colony early in 1888.[104]

[98] This statement is substantiated by G. Preis, *The Russian Jew in America*, 58.

[99] This contention was categorically denied by Preis and others in the Russo-Jewish press.

[100] Quoted from the *American Israelite*, 31:6 (Aug. 22, 1884), in the *American Hebrew*, 20:41 (Aug. 29, 1884).

[101] *Niedielnaya Khronika Voskhoda*, 4:198 (Feb. 17, 1885).

[102] *Ibid.*

[103] *Jewish Gazette*, 10:5 (Nov. 25, 1886).

[104] *Niedielnaya Khronika Voskhoda*, 7:25–26 (Apr. 6, 1888).

*The Arkansas Colony.* Late in 1882 or early in 1883, a tract of land was offered in Arkansas, midway between Little Rock and Memphis, Tennessee. About 150 people of the Am Olam group arrived there early in 1883. They were much impressed with the dense stretches of forest and communicated their impressions to friends. Due to these glowing reports, another group of 30 immigrants from Odessa also went to Arkansas. Upon their arrival at the beginning of summer, they were shocked at the conditions prevailing there and decided that agriculture in this region was impossible. They contracted to cut staves, but flood conditions prevented them from making prompt delivery. The heat was unbearable, and malaria and yellow fever soon began to spread. With these trying conditions, the colonists were on the verge of starvation. A number of them found work on tobacco plantations, but unaccustomed to that sort of work they had to give it up. By September 1883 almost all of the colonists had moved away.[105]

*Beer Sheba Colony, Kansas.* The founding of the Kansas colonies was initiated by the Cincinnati Jewish community which formed a special agricultural society. In an editorial "For Kansas," Rabbi Isaac Mayer Wise strongly appealed for popular support of the project. "It is the first step," he wrote, "to a new era in the history of those persecuted and ostracized men. It will open, we hope, a new chapter in the history of our people. For if the colonies will succeed, as we hope they will, they will open the way for thousands of families to follow that example."

The first colony which the Cincinnati agricultural society founded was that of Beer Sheba. It was founded through the initiative of Rabbi Isaac Mayer Wise, Joseph Abraham, and Leo Wise. On July 26, 1882, sixty men, women, and children were taken by a special committee to Kansas. Upon their arrival in Kansas City, they were met by members of a local committee who distributed food to the colonists. Upon careful deliberation the committee decided to send some of their members to the State agricultural department at Topeka and consult them about the choice of land. At the same time they also talked to farmers who spoke unfavorably about the land selected. The committee, therefore, decided to wait in Kansas City for further developments.

[105] Davidson, *Our Jewish Farmers*, 208–213, has the only available data on this colony.

On July 31, the Cincinnati committee in charge of the colonists received a telegram from Rabbi Wise advising them to go on with their original plans. He suggested that they go to Cimarron and inspect the land in that section. Leo Wise with other members of the committee went there, and after a stay of a few days they communicated with the committee to the effect that the land in Cimarron was much better than they expected and advised them to bring the colonists. On August 10, the colonists left Kansas City, and upon their arrival they were sworn in at the United States land office. The farmers in the neighborhood received the newcomers very cordially and promised their help. The immigrants were given food and supplies, and tents were temporarily erected for them.[106] They built a schoolhouse which also housed a synagogue. The colonists seemed to have been satisfied, and the colony showed signs of progress. To show their appreciation to the Hebrew Union Agricultural Society, the colonists sent the following letter dated December 25, 1882.

> May you ever prosper. All of us have signed our names to this letter. All of the brethren who are at present in the Beer Shebe Colony offer their thanks to you for the kindness and benevolence which you have shown to the destitute and miserable fugitives. May God grant you much health and prosperity and grace for the kindness with which you have thus far treated us, and for the promise also to aid us in future. We have received from you boots, shoes, stockings, socks, blankets, flannels and cattle, for which we, our wives and children, offer you our heartfelt thanks. Indeed, we are unable to express our true thankfulness. May the all-good God reward you with all that is good and great.
>
> We have especially to thank Mr. Loth in that he has sent us so able and good a man as Mr. Joseph Baum for superintendent. We are highly satisfied with him. He busies himself for us in every way, and we obey him. He treats us all alike. To him we owe that each one lives in his own house. Oh, gracious sirs! You have provided us with much more than our ancestor Jacob prayed to God for, for he asked for bread and clothing alone. You provide us with all necessities in a still higher degree. Therefore we are under obligations to repay your kindness with the utmost gratitude, in that you have aided the like of us poor and miserable ones in our sorrow and need. . . .[107]

[106] Lee M. Friedman, president of the American Jewish Historical Society, supplied the above data.

[107] *American Israelite*, 29:227 (Jan. 5, 1883).

In July 1883, the colony showed marked progress. From a report submitted by a representative of the Hebrew Union Agricultural Society, it seems that the colonists were well situated. They raised vegetables and other crops. The health of the colonists was excellent, and the farmers who lived in the vicinity spoke highly of the colonists in Beer Sheba. It was the opinion of the representatives that the colonists proved to be good farmers, and any failure was due more to the laxity of the initiators rather than to the farmers.[108]

In 1884, conditons in the colony turned for the worse. In a letter to his friends in Russia, H. M. Yarmilstein wrote that the Shochet (Reverend and slaughterer of chickens) of Beer Sheba informed him that the manager of the colony began to maltreat the colonists. He came in the company of the sheriff and confiscated some cattle and agricultural implements. This resulted in constant quarrels and disputes.[109] In July 1884, the colonists appealed for help through the columns of the *Jewish Gazette*.[110] The Hebrew Agricultural Aid Society of New York responded, and at a public meeting of the Hebrew Colonization Society, held on January 7, 1885, it was decided to send more colonists to Kansas.[111] This decision was upheld at the subsequent meeting held on February 24.[112] The internal dissention as well as insufficiency of funds led to the disintegration of the colony in 1886. Some colonists sought employment in the vicinity, while others bought farms in other sections of the country.

*Montefiore, Kansas.* In March 1884, another colony was founded in the southern part of Kansas. It was named in honor of Sir Moses Montefiore. The prospects seemed to be bright. The colonists broke ground and sowed wheat. They were very enthusiastic and hoped for a bright future. With the money received from the Hebrew Emigrant Aid Society, the colonists hired laborers, and by autumn they managed to gather their first harvest. The neighboring farmers were at first very skeptical and doubted the success of the colony. They looked upon the colonists as land speculators who came to Kansas to get fertile land and sell it at a profit. As time went on, however, and the colonists gathered their harvest, the farmers changed their attitude and began to cooperate with them. The colonists built a synagogue and a schoolhouse and introduced a number of improvements. When the world celebrated Sir Moses Montefiore's birthday, the colonists sent him a letter of congratulations in which they told him of their achievements. They also sent him some of the products of their first harvest as a gift.[113] A year later things turned for the worse. The soil did not prove as fertile as they expected, and no aid was forthcoming. The colonists, unable to cope with the situation, sold the land and left the colony.[114] Some colonists settled in the Alliance colony in New Jersey, and the rest bought farms near the Lasker colony.

Other colonies were founded in southern Kansas. They were: Hebron, Gilead, Touro, and Leeser. All of these colonies were, however, of short duration.

*Lasker Colony, Kansas.* Some of the survivors of the Arkansas colony went to New York and made preparations for another colonization experiment. Michael Heilprin promised his support, but he did not succeed in securing the cooperation of his colleagues. The colonists, therefore, decided to save some money of their own. They, therefore, found employment in New York, and laid aside a fund for their forthcoming colony. They planned to divide their membership into small groups, alternating between the life in the city and the colony, to give everybody an opportunity to work on land until the time arrived when all could settle in the colony.[115]

In April 1884, thirty colonists left for Saint Louis and made inquiries at the United States land office concerning available locations. They went to Dodge City, and from there they proceeded to the Montefiore Colony. Upon their arrival, they learned that all desirable government land was preempted. They, therefore, set out over the western plains and finally settled on land near Ford City in Kansas. Upon Heilprin's suggestion, they named the colony Lasker, in honor of Eduard Lasker, the German economist.

The first few months the colonists were busy building houses and digging wells. "The plan of operation was intelligent and unique. Fearful lest divergent religious or economic viewpoints might

[108] *Jewish Messenger*, 55(11):5 (Mar. 14, 1884).
[109] *Hamelitz*, 20:591 (May 7, 1884).
[110] *Jewish Gazette*, 9:3 (Jan. 5, 1885).
[111] *Ibid.*, 10:2 (Jan 8, 1886).
[112] *Ibid.*, 10:3 (Feb. 26, 1886).
[113] *Jewish Messenger*, 56(20):4 (Nov. 14, 1884).
[114] *Niedielnaya Khronika Voskhoda*, 4:141 (Feb. 3, 1885).
[115] *Ibid.*, 3:4–5 (Jan. 18, 1884).

disrupt the colony, each small group was composed of people of like temperament and was granted autonomy in the conduct of its affairs."

The first harvest proved to be very disappointing, and the second season witnessed a drought. Despite the hardships, they carried on. In 1886, a land company began buying land for an irrigation project. The colonists sold their holdings and moved away.[116]

*The Alliance Colony in New Jersey.* The four agricultural colonies in New Jersey had their inception within the ten years, 1882–1892. During that time the Alliance colony was established by the Alliance Israélite Universelle and the Hebrew Emigrant Aid Society; Carmel by Michael Heilprin and the Montefiore Agricultural Society; Rosenhayn, by the Hebrew Emigrant Aid Society; and Woodbine, by the Baron de Hirsch Fund.

In 1882, the Alliance Israélite Universelle, with the aid of the Hebrew Emigrant Society, was looking for a site to establish an agricultural colony. Some rich farm land was offered them for colonization. Julius Goldman cautioned the members of the aid society in the selection of land. "We must act with care, deliberation and forethought in selecting and placing the colonists," he said. "We must deal with them as businessmen and businesswomen."[117] The committee, after careful deliberation, was about to accept the offer near Freehold, New Jersey, when the Leach brothers persuaded the Hebrew Emigrant Aid Society to buy their property in southwestern New Jersey, near Salem County, 6 miles from Vineland. The proximity and accessibility by railroad to the markets of New York and Philadelphia had weight in guiding their choice. The committee took into consideration the fact that the farm products could reach Philadelphia in one hour and New York in three. South Jersey's fertile soil proved especially advantageous, and "the comparative ease with which agriculture adapts itself to the personnel of the new settlers."[118]

The report of the investigating committee stated that the chief crops in this district were fruits that matured in three months. All the other farm products were permanent crops; when once planted, they lasted for years. "The advantage for these new settlers consists in the fact that they are able to produce in their second and third year, so that beyond the first labor of getting the trees and vines, no further skill or work is necessary than is required in keeping the soil fresh and free from weeds."[119] The report did not minimize the difficulties which might confront the settlers. The soil, though partially sandy, had been recovered from dense thickets of pines and other trees. However, the colonists would in time overcome these difficulties, because constant cultivation would hasten their decay and disappearance. The Hebrew Emmigrant Aid Society contracted with George Leach Brothers, to erect three temporary buildings, and in May 1882 forty families were settled on the land. A few months later, twenty-seven more joined them. The settlers declared themselves willing to become farmers. The colony was named Alliance in honor of the Alliance Israélite Universelle. The land was divided into farms of 15 acres each, and two-room houses were built. The streets of the colony were named in honor of the trustees of the Alliance. A team of horses was procured to plow the soil, and some of the neighboring farmers were hired to help break the soil and plant the crops. In order to supplement their income, the farmers turned to berry picking and to harvesting for their neighbors. A. C. Sternberg, a Connecticut farmer, was engaged to take charge of the settlements. Contracts were awarded under which each farmer had to pay $350 for his holdings within ten years. In addition, shirt, cigar, and clothing factories were established, and in these the settlers found employment.[120]

The first two years were rather troublesome. According to the superintendent's report, many of the settlers had not acquired the sturdiness and patience which makes a successful farmer. It was a difficult task to eliminate this element, but after continuous effort they were removed and those who remained struggled on manfully. "They maintained the most excellent discipline and are ready to undergo many hardships to attain success."[121]

In 1883, the colony had over fifty farms cleared and cultivated. Each farm had a dwelling with the necessary extensions. Most of the colonists also constructed rude huts and sheds for the cat-

[116] Davidson, *Our Jewish Farmers*, 224–225.
[117] *American Hebrew*, 11:130 (July 28, 1882).
[118] *Ibid.*, 11:115–116 (July 21, 1882).
[119] Report of the Investigating Committee, p. 19, in the files of the Baron de Hirsch Fund.
[120] *Ibid.*, 20; *American Hebrew*, 19:200–201 (Aug. 8, 1884); *Jewish Messenger*, 53 (9):5 (Mar. 2, 1883).
[121] *American Hebrew*, 11:103–104 (July 14, 1882); also *Jewish Messenger*, 52:2–3 (July 25, 1882).

tle, and the efforts of the farmers brought gratifying results.

The success of the colony was so great that the Mansion House Committee in London sent additional money to purchase more land. In August 1883, a committee consisting of Dr. Adolphe Huebsch, Professor Gustave Gottheil, and others paid a visit to the colony. They were greatly pleased with the results attained. In their account of the visit they stated that the colonists excelled in their thrift and diligence. The men, they wrote, worked in a cigar factory, and the women learned cloak making. They had the admiration and respect of their neighbors who were willing to aid them whenever such aid was required.[122]

An editorial in the *American Hebrew* reads:

> The report of the distinguished visitors is another indication, and a strong one, of the direction in which intelligent philanthropic effort will tend. The watchword of charity must be labor. While we can direct the youth into artisan occupations by means of industrial education, we can only place elderly men into industrial channels, and out of trading ruts, by means of occupations whose mysteries can quickly be mastered, and which are speedily remunerative. These advantages are possessed in the greatest degree by agricultural pursuits.[123]

This visit was followed by one from Henry S. Henry and Isaac Eppinger, and they likewise reported favorably on the progress of the colony. As a result of their report the New York Jewish Ministers' Association sent $5,000 to the colony. Articles likewise appeared in the Russian periodical, *Niedielnaya Khronika Voskhoda*, praising the work of the colonists. At the same time, however, the writers criticized the Jews of America for lack of wholehearted cooperation and their inability to understand the Russian colonist and his aspirations. They blamed the directors for not having at the outset selected those colonists who were fit for farming. This, they said, would have saved a great deal of misunderstanding and hard feelings.[124]

It was at this stage that representatives of the Mansion House Committee came to the United States and visited the Alliance colony. They saw that much had been done, and the prospects of success were so apparent that, upon their return to London, they induced the committee to continue its aid and furnish the colonists sustenance over the winter. At their request, a new corporation, the Alliance Trust Fund, was formed to issue deeds of possession to the colonists on terms that gave each one a free gift of one-half the value of the farm and allowed thirty-three years to pay the other half.[125] This generosity infused new life into the colony. "To those who visited the colony before, a glance at the colony would suffice to remove the slightest shadow of doubt into the bright prospect of the greatest Jewish colony in the world. . . . The success at the Alliance colony is a retort to those who say that the Russian Jews are not fit for colonization."[126]

The manager of the Alliance colony submitted a report in which he gave an account of the colony's achievements. Among other things he said:

> Nearly all of the adult males are employed in agricultural pursuits, which are conducted so as to illustrate the methods employed in the United States in developing virgin soil. Some of the men who are expert handicraftsmen we have employed at their respective trades at the colony. . . . Most of the women having large families of young children to care for are engaged in domestic avocations. . . . I take pleasure in announcing the satisfactory hygienic condition of the colony. . . . We have not now, nor have we had, a single case of serious sickness. . . . The rites of their religion have been in every respect strictly observed. . . . In no other form of occupation than agricultural colonies can they be strictly observed or maintained. . . . In consequence of the greatest opinion so confidently expressed in many quarters that the Jew would never make an agriculturist, . . . fears were entertained that my labor here would prove futile and that this colony was doomed to failure.
>
> It is with the highest pleasure that I am enabled to state, as the result of my experience here, that during my work as a practical farmer, I have rarely found beginners who have proved pupils more apt than the refugees.[127]

In 1889, the colonist applied for naturalization and took an active interest in local politics. In the next two years, most of the farmers were compelled to borrow money or mortgage their farms to various local associations. With this money they paid the debts previously contracted, and they also made many improvements on their farms. As long as they were able, the colonists paid the interest

[122] *American Hebrew*, 16:18 (Aug. 24, 1883).

[123] *Ibid.*

[124] *Niedielnaya Khronika Voskhoda*, 4:197–199 (Feb. 17, 1885).

[125] *American Hebrew*, 20:66–67 (Sept. 12, 1884).

[126] *Ibid.*, 20:130 (Oct. 27, 1885).

[127] *Ibid.*, 11:103–104 (July 14, 1882); *Jewish Messenger*, 52:2–3 (July 25, 1882).

on the loans which they had negotiated, but a period of depression set in, and the prices obtained for farm products fell so low that the colonists were unable to meet their obligations. The Baron de Hirsch Fund then came to their aid and enabled them to carry on.

A more complete picture of how the colonists fared at Alliance is provided by the following excerpts from a letter by one of the colonists.

> I had the privilege of being one of the men to settle in the Alliance colony. . . . Our thought was to live in the open. . . . We desired to be dependent for our living upon the elements of Mother Earth. . . . we wanted to live a healthy life. . . . our goal was to own a home and land and be faithful citizens of our adopted country. . . . we aimed to bring up our children to be healthy, honorable and useful citizens.
>
> Our farms were cleared and we mastered the rudiments of farming by bitter and most trying experience. . . . Our children had to walk a long distance to a school. . . . Finally, we managed to build our own schoolhouse. We inaugurated a Sabbath school, we established a library. Now we have a dramatic club, and we arrange periodic literary and social meetings which excel in interest and content. Our colony can be termed a real success.[128]

The Alliance colony as such lasted till about 1908. In 1904 the colonists owned about 1,800 acres, having a value of about $125,000. The educational and social life of the colonists was not neglected. They had a synagogue, schools, and social halls. Public lecturers from Philadelphia and New York were invited to speak and "thus afford opportunity to the older as well as the younger generation to obtain a broader view of life."[129]

In 1908, the work was taken over by the Jewish Agricultural Society. Its policy was to encourage farming and make the farmers rely upon their own resources and treat them on a business basis. These individual farms are still flourishing in various parts of New Jersey. The progress of the individual farms is well illustrated by the following statement:

> To-day, in 1932, as we "old timers" return to celebrate the Golden Jubilee, the landscape presents a vast change. The old farmers are gone. . . . Many of the old farmsteads are no more. In their places have sprung up many small poultry farms. . . . The homes are modern in every sense of the word, and a majority of the residents . . . are perhaps as much urban-minded as are those of the later generations who migrated to the cities.[130]

*Carmel, New Jersey.* The Carmel colony in New Jersey was founded in 1882. In that year six Jewish families settled there through the efforts of Michael Heilprin. A few months later, six more families joined them. Homes had been rented for the colonists, and regular aid was promised to them. Unfortunately, no special committee was appointed to guide them. Thanks to the support of Heilprin, the colonists carried on. They cleared a portion of the land allotted to them, and to their great satisfaction the first harvest was better than they expected. Their initial success prompted twenty-six more families to join the colonists. The newcomers built homes and regulated their own communal life. They had a synagogue, post office, and other institutions. The colonists supplemented their income by working in a clothing factory.[131] With the illness of Heilprin, the colony began to decline. This prompted the colonists to send the following petition to Baron de Hirsch:

> As former pioneers of widespread movement which called forth the applause of the whole civilized world, and as newly-made citizens of a glorious republic where religious persecutions were an anomaly of very doubtful vitality, we humbly bow our careworn but tired heads before the foremost philanthropist that amazes an admiring world by his unheard of munificence with the following petition.
>
> Having fled atrocious persecutions in Russia, we have established ourselves here as farmers, by the aid of a group of co-religionists with the patriotic Mr. Michael Heilprin at the head. We have succeeded so far in laying some kind of a foundation for our future success on the honorable field of agricultural pursuits, but just now Mr. Heilprin feels much strained and almost unable to continue the work.
>
> There are forty families all of whom have begun to do something with a view of getting a foothold on the fertile soil, but we are staggering under the heavy burdens of life, and we can hardly see our way out of many difficulties. Knowing the noble qualities of your heart as well as your patriotism, we now take the liberty of appealing to you to aid in our struggles for life as for

[128] *Niedielnaya Khronika Voskhoda*, 4:451–453 (Apr. 21, 1885).

[129] Report on the colonies submitted in 1904, p. 2–3, in the files of the Jewish Agricultural Society.

[130] *Yoval-Jubilee Book of Alliance* (New Jersey, 1932), 27.

[131] J. D. Eisenstein, *Otzar Sichronosai* [Autobiography and Memoirs] (New York, 1929), 275.

the sake of establishing a valuable precedent in the history of Jewish colonization. We will thus be helped to achieve our highest aim in life. . . . It is chiefly for the sake of our children that we beg you to consider whether you cannot show your benevolence to us also as you have shown it on a grander scale on so many good occasions.[132]

*Rosenhayn, New Jersey.* The Rosenhayn colony, situated in the township of Deerfield, Cumberland County, New Jersey, was founded in 1882. In that year six families were sent there by the Hebrew Emigrant Aid Society, through the initiative of Michael Heilprin. The first colonists suffered privation, because there was no one to guide them, and they, therefore, left the colony. Five years later, however, when the success of Alliance became widely publicized, thirty-nine other families settled there. In 1888, when Heilprin died, the Reverend Sabato Morais became interested in the colony and appealed to the Baron de Hirsch Fund for help. It forwarded $5,000, and the money was distributed by Moses Klein of Philadelphia, whom the Hebrew Emigrant Aid Society sent for this purpose. By 1889 the population of Rosenhayn was 249. A large building was converted into a clothing factory where the colonists found employment. They worked hard and in the course of a few years began to see results. The report submitted to the Jewish Agricultural Society in 1904 states that the colonists had made great progress. They had learned to adopt the farming methods of their non-Jewish neighbors, and this bettered their condition a great deal.

The colonists established local social, religious, and communal institutions which were "important means toward making the lives of the colonists and their children more pleasant so that the temptations of the city life are almost entirely disregarded."[133] As in the Alliance colony, the settlers bought farms of their own. Unlike Alliance, however, the Jewish Agricultural Society organized at Rosenhayn clothing factories which were operated by contractors. The society also erected a cannery, and these industries aided the colonists of Rosenhayn. The reports as late as 1934 testify to the progress of the newly created farms which were an outgrowth of the original colony.

At the close of the year 1884 and the beginning of 1885, immigration decreased and with it the tempo of Jewish colonization. Those colonies already established carried on, but no further attempts were made to colonize Russian Jews on any large scale. The Jews of the United States had time to evaluate the results of the attempts. Opinions varied but, on the whole, the Jewish philanthropists looked at the attempt as a worthwhile undertaking. They felt that they had done something toward the amelioration of the condition of the immigrants. Editorial opinion coincided with that of the philanthropists. To quote an editorial of the *American Hebrew*:

> The epoch of enthusiasm in colonization affairs is over and gone, the enormous immigration which of itself indicated the method of outlet has subsided, and we are free to contemplate the creatives of the past triad of years in any way of agricultural settlements by Jews. As might have been expected many and egregious blunders were made. Unsuitable locations were selected along with favorable ones; incapable men were put in charge as well as capable; vast sums of money were spent, squandered here and economically applied there. So that with a Sicily Island colony, we had a Vineland; with Cotopaxi, a Painted Woods; and while the failures are rapidly passing into oblivion, the successes are daily reaching an ever securer foundation.
>
> Even the successful colonies, of course, have their varying measures of success, some had to struggle against circumstances of unusual hardships, such as extreme vigor of climate, while others found fertile soil at once. Some have been located near civilization and have enjoyed the sympathy and active cooperation of wealthier neighbors; others, again, in the confines of the wilderness, have had to submit to a sense of isolation, not the best encouragement for an exile in a new land in a pursuit unfamiliar, too.
>
> It has been, however, hitherto one of the most gratifying features of all cooperation on the part of the American Hebrews, that we have had the consciousness that we were assisting our brothers in kith as well as in race. We thought we were aiding in the formation of Jewish communities, where not alone Jewish fundamentals, but Jewish customs also should be carried out.[134]

In 1887, Baron de Hirsch became interested in Jewish colonization in the United States. In 1891, when the Jewish Agricultural Association was founded, Baron de Hirsch contributed a substantial sum of money. Stirred by his interest, the Central Committee of New York decided to stimulate the growth of farming among immigrants. The committee decided to establish industrial-agricultural colonies in the vicinity of towns or cities.

[132] *Yoval-Jubilee Book of Alliance*, 33.

[133] See the colony's 1904 report.

[134] *American Hebrew*, 20:130 (Oct. 10, 1884).

Only those who had means of their own to invest were encouraged to settle on land. A special committee was appointed to search for sites, and some of the old farms were sold to individual Jewish farmers at a low rate. With the increase of immigration in the nineties, the problem of aid came up again, and a Russian auxiliary committee was formed to find a new location for a colony. The committee finally bought a tract of land comprising 5,300 acres near Woodbine.

*Woodbine, New Jersey.* The Woodbine colony was founded in Cape May County, New Jersey, in 1891, by the Baron de Hirsch Fund. Farming was to be the chief occupation, but to make it more remunerative it was decided to reserve a portion of land as a site for a village. This village was to contain a local market for farm produce as well as factories to give employment to members of the farm families. By 1882 about fifty farmhouses were completed, and that year the same number of families moved to Woodbine. The soil and climatic conditions were poorly suited to general farming, and this situation prompted the trustees to institute certain industries. A clothing factory, a machine shop, and other factories were, therefore, established. By 1901, Woodbine was incorporated as a municipality, and an agricultural school was established. They elicited praise from many visitors, and the achievements exceeded all expectations.[135] The Fund was pioneering and obviously made many errors, but nevertheless was of great service to those whom they succeeded in colonizing at Woodbine.[136]

*Mitzpah, New Jersey.* The colony Mitzpah, located near the railroad junction between Philadelphia and Atlantic City, was founded in 1891, by the Mitzpah Agricultural and Industrial Company. At the head of the project was J. D. Eisenstein. The land was purchased from Anna Cox for the sum of $5,200 to be paid in regular installments. Some of the land was sold to the New Jersey Land Company, and the rest was mapped out in farm lots. In 1892, a factory was built, and houses were erected. The colonists stayed there till 1885. In that year, the price on land dropped, and many of the colonists were forced to abandon the colony. In 1897, however, some of them returned. To supplement their income, many worked in a nearby factory and were able to carry on till about 1900.[137]

*Other Colonies.* Other colonies founded in New Jersey were Montefiore, Riga, and Ziontown. All three of them were of short duration.

An agricultural colony was also founded in Connecticut in the nineties. The Baron de Hirsch Fund purchased abandoned farms and founded a colony near Chesterfield. The colonists established a creamery and sold their products in Norwich and New London. To supplement their income, they became cap and pocketbook makers. A synagogue and a school were built, and cultural and educational activities were promoted. After three years of struggle the colonists abandoned their farms.[138]

An attempt to found a colony was also made by Professor Felix Adler, founder of the Society for Ethical Culture. His objective was the removal of immigrants from congested areas, but his group met with little success.[139]

A colony which attracted attention at the time was the Palestine colony in Michigan. The colony was founded in 1891. A peddler named Hyman Lewenberg procured a loan from some bankers in that section with the promise that he would persuade his friends to settle on land. A number of colonists went there, but bad weather brought destitution. The Baron de Hirsch Fund sent $3,000, and the colonists used the money to pay the initial debts. They continued working on the land, but the next three years brought continuous hardship. The trustees of the Baron de Hirsch Fund then came to the conclusion that it did not pay to prolong the agony, and the colony was liquidated.[140]

## CONCLUSION

Many reasons are given for the failure of the Jewish agricultural colonies. There were some among the Russian Jews who ascribed the pogroms to the fact that there was no agricultural class among the Jews of Russia. They felt that it was of utmost importance to prove to the world that the Jews, like other nationalities, can become good farmers. This was the underlying aim of the Am Olam groups. They wanted to settle on land

[135] *Niedielnaya Khronika Voskhoda*, 17:1713–1716 (Nov. 15, 1899), 21:33–35 (Apr. 15, 1903).

[136] For a detailed account, see Samuel Joseph, *History of the Baron de Hirsch Fund* (Philadelphia, 1935), 48–115.

[137] Eisenstein, *Otzar Sichronosai*, 282–284.

[138] *Niedielnaya Khronika Voskhoda*, 11:592–593 (May 24, 1892).

[139] Eisenstein, *Otzar Sichronosai*, 281–282.

[140] Davidson, *Our Jewish Farmers*, 234–249.

in the United States and pave the way for others. To them it was a matter of self-preservation, rather than an economic issue. These idealists wanted to establish cooperative farms, where every member of the colony would have an equal share. Very few of them were, however, prepared to face the privations that pioneers must be ready to face. Most of them were professionals and members of the middle class, totally unfamiliar with farming. In spite of their lack of training or experience, the colonists proved to be zealous and diligent workers. Their industry and willingness to learn were highly praised by their neighbors, in whose eyes the colonists won the highest esteem. The farmers were of the opinion that the colonists did their best under most trying conditions.

The Jews of the United States, alarmed by the atrocities in Russia, sought a way to alleviate the condition of their brethren in Russia. They wanted to establish agricultural colonies, to make the immigrant self-sustaining, and to relieve the congestion in the large communities. In their eagerness to settle the newcomers on land, the committees in the United States were not careful in selecting the sites and the type of immigrant who would be fit for farming.

Two views clashed—that of the Russian idealist and the practical American Jew. It took a long time to create mutual understanding, and in the meantime the projects undertaken turned out to be total failure.

Another important factor brought about the confusion. Faced with mass migration, the American Jews hoped to secure the cooperation of the leading Jewish communities in Europe. They requested that the European committees carefully select the immigrants. This was, however, not attained. The European communities could not be blamed. The Jews of the United States, far removed from ports of embarkation, did not realize how difficult it was to stem the stream and regulate immigration according to prescribed rules.

The situation became somewhat different in the nineties, with the entrance into the picture of the Baron de Hirsch Fund. Some of the blunders were rectified. The colonies were established on an industrial basis, where private enterprise was encouraged. The newly founded colonies were far more successful, and they laid the foundation for widespread farming among the Jews. This work was taken over by the Jewish Agricultural Society, whose constructive work opened a new chapter in American Jewish history. Thanks to the work of this organization farming became popular among the Jews of the United States. ". . .there are stories of human achievement buried in the [Jewish Agricultural] Society's archives that deserve a wider public. They are not typical or average examples; rather do they show what can be accomplished by an urbanized folk once opportunities are opened up and energies are permitted to have full sway."[141]

[141] *Ibid.*, 166.

## THE *AMERICAN FARMER*, A PIONEER AGRICULTURAL JOURNAL, 1819–1834

HAROLD T. PINKETT

*National Archives and Records Service, Washington, D. C.*

The appearance in 1819 of a periodical bearing so novel a title as the *American Farmer* excited curiosity and suspicion. An aged gentleman commented, "what won't they get a going next!" A farmer asked, "what is it?" A bystander replied, "why a thing to coax us farmers to vote them into office, I'spose."[1] The curiosity and suspicion were natural, for the *American Farmer* appeared when there was no other periodical publication in the United States devoted mainly to agricultural subjects. The *Agricultural Museum*, the first agricultural paper published in the country, had disappeared in 1812 after only two years of publication and very limited circulation.[2] The suspicion, later dispelled, that the *American Farmer* was to be an instrument for getting votes was prompted by

[1] *American Farmer* (Baltimore), 15:33 (Apr. 12, 1833).

[2] The *Agricultural Museum* was published at Georgetown, District of Columbia, under the editorship of the Reverend David Wiley, as the organ of the Columbian Agricultural Society. See Claribel R. Barnett, "The Agricultural Museum, An Early American Agricultural Periodical," *Agricultural History*, 2:99–102 (April 1928).

familiarity with political tendencies of most contemporary journals.

The *American Farmer* was established by John Stuart Skinner, the most able, energetic, and influential figure in the early history of the American agricultural press. Also in other respects he was an interesting person. He was born February 22, 1788, on a farm in Maryland, where he lived until early manhood. He was trained for law practice but abandoned it at the beginning of the War of 1812 when President James Madison appointed him inspector of European mail at Annapolis. Later he was appointed an agent for prisoners of war and in 1813 was commissioned a purser in a naval office in Baltimore. When the British forces were moving toward Washington in August 1814, he rivaled the feat of Paul Revere by riding 90 miles in the night to announce their coming. In 1816 Skinner became postmaster at Baltimore, a position he retained until 1837. His editing of the *American Farmer* during these years was therefore an avocational pursuit. Later he was appointed Assistant Postmaster General of the United States.[3]

The general and specific aims that motivated Skinner's establishment of the *American Farmer* and guided his editorship were clearly set forth in the first issue, which appeared in Baltimore on April 2, 1819. The general aim was to show that the truth of the proverb, "Knowledge is power," is amply exemplified in the fortunes of agriculture. Specific objectives were the collection and publication of information "from every source, on every branch of Husbandry, thus to enable the reader to study the various systems which experience has proved to be the best, under given circumstances." It was also stated that the journal was to be a medium for the presentation of information concerning new agricultural inventions and the prices of farm commodities. Moreover, it was hoped that the farmer and his family would benefit from the publication of articles designed for their amusement and instruction. In striving toward these goals Skinner hoped that the *American Farmer* would stimulate the rise of agriculture in his native State from the low ebb to which it had fallen after the War of 1812.[4]

The periodical was in a financial sense a continuation of the *Maryland Censor*, whose subscribers received the *American Farmer* until the termination of their subscriptions on August 19, 1819.[5] This arrangement appears to have been made as a result of Skinner's purchase of the publishing facilities of the owners of the *Censor*, a pro-Democratic paper published from August 19, 1818 to about February 3, 1819.[6] Aside from this financial connection there appears to have been no other relationship between the *American Farmer* and the *Maryland Censor*.

Skinner's journal was a weekly of eight quarto pages. Its subscription rate was $4 a year, payable in advance. Its subject matter was summarized in the following subtitle: "Rural Economy, Internal Improvements, News, Prices Current." In the best journalistic fashion of the period it carried as a motto a famous quotation from Vergil: "O fortunatos nimium sua si bona norint agricolas."

All subjects of agricultural interest found their way to the columns of the *American Farmer*. The introduction of new crops, improvements in tillage, fertilization, and drainage, and the breeding of livestock were among the broad and important

[3] Herbert A. Kellar, "Skinner, John Stuart . . . ," in *Dictionary of American Biography*, 17:199–201 (New York, 1935); and Ben. Perley Poore, *Biographical Sketch of John Stuart Skinner*, reprinted . . . by John L. O'Connor (New York, 1924). The memoir by Poore appeared originally in the *Plough, the Loom, and the Anvil* (Philadelphia), 7:1–20 (July 1854).

For other estimates of Skinner's career that appeared at the time of his death, see *Baltimore Clipper*, Mar. 22, 1851; *American Agriculturist* (New York), 10:163 (May 1851); *American Farmer*, 6:348 (April 1851); *Cultivator* (Albany, N. Y.), n.s., 8:183 (May 1851); *Ohio Cultivator* (Columbus), 7:104 (Apr. 1, 1851); *Plough, the Loom, and the Anvil*, 3:658, 4:348–350 (April, December 1851); *Prairie Farmer* (Chicago), May 1, 1851.

For other modern accounts, see John Lee Coulter, "Skinner, John Stuart," *Cyclopedia of American Agriculture*, ed. by L. H. Bailey, 4:611–612 (New York, 1909); Avery O. Craven, "The Agricultural Reformers of the Ante-Bellum South," *American Historical Review*, 33:308–309 (January 1928); Albert Lowther Demaree, *The American Agricultural Press*, 1819–1860 (New York, 1941), 23–38; Myrtle Helfrich, "A Baltimore Pioneer of Farm and Turf," *Baltimore Sun*, Feb. 17, 1935; William Edward Ogilvie, *Pioneer Agricultural Journalists* (Chicago, 1927), 3–9; Louis Bernard Schmidt, "Skinner, John Stuart . . . ," *Encyclopaedia of the Social Sciences*, 14:72–73 (New York, 1934).

[4] *American Farmer*, 1:5 (Apr. 2, 1819).

[5] *Ibid.*, 159, 167 (Aug. 13, 20, 1819).

[6] Clarence S. Brigham, *History and Bibliography of American Newspapers*, 1690–1820 (Worcester, Mass., 1947), 1:238.

subjects that were treated in letters, editorials, essays, reports, addresses, and treatises. Skinner invited material from "gentlemen qualified by study, reflection, or experience, to add even one ray of light to the common stock of intelligence" on these subjects.[7] His own travels and observations provided much information concerning current agricultural developments. Among the distinguished American agriculturists whose views appeared on the pages of the *American Farmer* were Thomas Jefferson, James Madison, Edmund Ruffin, John Taylor, and Timothy Pickering. The journal also included excerpts from the writings of Englishmen such as Sir John Sinclair, Arthur Young, and William Cobbett, men in the vanguard of a movement destined to be called an agricultural revolution. Although they were difficult to obtain, contributions were always sought from dirt farmers. Skinner declared that he desired to publish "the *experience* of the sun-browned practical Farmer, in preference to the fine spun lucubrations of the Philosopher, or the calculations, however profound, of the political economist".[8] Communications from some farmers indicated that they were skeptical of "book farming" or that their attitude toward writing was similar to that of the famous agriculturist, Jethro Tull, who once declared: "Writing and ploughing are two different talents; and he that writes well must have spent in his study that time which is necessary to be spent in the fields by him who will master the art of cultivating them."

Editorial policy regarding news and views of a political or sensational character was soon made clear to readers of the *American Farmer*. They were warned not to expect to find the journal "filled with light ephemeral speculations and essays, cooked up to satisfy the ever craving appetites of news-mongers and politicians."[9] They were repeatedly informed that the journal's main purposes lay in agriculture and domestic economy and that party politics would not be allowed to enter its columns. This policy was adhered to faithfully. It was maintained that there were already enough papers in the country whose principal purpose was to "fan the embers" of party. However, occasionally there were published articles on "political economy" or the "politics of agriculture" with a view to enlightening farmers concerning their political rights and the powers of government in matters affecting their welfare.[10] Moreover, farmers were sometimes taken to task for their apathy toward political matters. As consumers of imported commodities and payers of imposts they were urged to be more active in obtaining legislation to protect their interests.[11] At the same time more state aid to agriculture was urged. In this connection the following criticism was made of conditions in Maryland: "Hog laws, and goose laws, and lottery laws, and bank laws, and insolvent laws appear to make up the Alpha and Omega of the Maryland statute book. Is it not time that something was done, for the *farming* and *planting* interest. . . ?"[12]

In general controversial subjects such as the tariff and slavery were avoided in the journal despite their relation to agricultural prosperity. However, Skinner did indicate an abhorrence to the principle of slavery but opposed the manumission of slaves without provision for their colonization outside of the United States. He recognized no right but that of the State governments to interfere in any manner in what he considered "a matter essentially *domestic*." Indeed he held quite unrealistically that slavery was a matter toward which the national government had "no right even to *glance*."[13]

The *American Farmer* was enthusiastically greeted by agricultural societies throughout the United States. The Agricultural Society of South Carolina recommended it to the planters of the State as a paper "highly worthy" of their perusal. The president of the Agricultural Society of the Eastern Shore of Maryland "wished it was in the hands of every farmer in the United States." The Agricultural Society of Albemarle, Virginia valued it to the extent of presenting the first volume to each of its members.[14] The journal worked hand in hand with agricultural societies, for most of its objectives were identical with those of the societies. It published addresses delivered before the societies, lists of their members, copies of their constitutions, and accounts of their cattle shows and fairs. Moreover, Skinner was a member of several agricultural societies and frequently delivered addresses at their meetings and served

[7] *American Farmer*, 1:5 (Apr. 2, 1819).
[8] *Ibid.*, 4:47 (May 3, 1822).
[9] *Ibid.*, 1:265 (Nov. 12, 1819).
[10] *Ibid.*, 5:51, 384 (May 9, 1823, Feb. 20, 1824).
[11] *Ibid.*, 304 (Dec. 12, 1823).
[12] *Ibid.*, 1:207 (Sept. 24, 1819).
[13] *Ibid.*, 11:167 (Aug. 7, 1829).
[14] *Ibid.*, ed, 3, 2:i (July 2, 1821).

as a judge at their exhibitions. In 1829 he was awarded a medal by the Agricultural Society of South Carolina for services in "the promotion of the agriculture of the United States."[15]

Much attention was given to the introduction of new plants and seeds. The Secretary of the Treasury was commended for an order which instructed American consuls to send rare plants and seeds to America whenever possible. The Secretary of the Navy was urged by Skinner to issue a similar order to commanders of American ships in foreign areas. All interested persons were asked to send new plants and seeds to the office of the *American Farmer* so that they could be distributed among farmers for experimental planting. There was a generous response to this request, but the editor complained that few farmers wrote concerning the results of their experiments. However, the journal can be credited with having pioneered in an activity that was to make a great contribution to American agriculture.

The *American Farmer* was also a pioneer in the advocacy of agricultural education. It predicted that the establishment of agricultural schools in the United States would usher in a new era in farming. It insisted that a knowledge of agricultural science would enable farmers to direct their labors with more certainty of result and economy.[16] Encouragement was given to the study and dissemination of information pertaining to agricultural and industrial schools in Europe and America conducted along lines advocated by the great Swiss educator, Philipp Emanuel von Fellenberg.[17] It was hoped that the establishment in 1821 of the Gardiner Lyceum at Gardiner, Maine, the first exclusively agricultural and industrial school in the United States, would lead to the founding of similar institutions throughout the country. Moreover, the publication of more agricultural books was recommended. A proposal for the publication of an American Farmers' Encyclopedia was commended, but doubt was expressed that adequate remuneration could be obtained from such a project.[18]

It has been pointed out that the words "Internal Improvements" were a part of the subtitle of the *American Farmer*. This subject was dear to Skinner's heart and was ardently championed by his editorial successors. He believed that cheap, safe, and quick transportation was indispensable to agricultural prosperity and insisted that attention in the journal to internal improvements was designed to inform farmers concerning new, cheaper, and more expeditious roads to market and to show them how time formerly employed in transportation could be used in production.[19] Consequently, the journal teemed with articles and letters describing or advocating the construction of roads, canals, bridges, and railways. In deference to the objections of some of his readers Skinner for a time discontinued discussions of internal improvements. However, soon after the publication of Secretary of War John C. Calhoun's report of 1824 on this subject, Skinner returned to it with gusto. He was so conspicuous an advocate that in April 1825 the Maryland Society for Internal Improvements invited him to edit and publish a quarterly journal for the promotion of public works. After some deliberation he declined this invitation, fearing that the increase of literary work would interfere with his duties as postmaster.

Other prominent subjects in the pages of the *American Farmer* were horse races and efforts for improving the breeds of American horses. To the objections of some subscribers to accounts of races and pedigrees of horses Skinner replied: "We can never have the best saddle horses, and horses swift in harness, that will *hold it*, without the racing stock. To keep them *pure*, pedigrees must be faithfully recorded and kept; and to have them of the highest qualities and powers, there is no test but the *turf*."[20] His great interest in horses led to his establishing in 1829 the *American Turf Register and Sporting Magazine*, the first journal of its type published in the United States.[21]

In 1821 Skinner established a stock farm which was represented as being the first attempt to improve the domestic animals of the United States on "a settled and permanent plan." This project was ardently supported by Sir John Sinclair who promised to assist Skinner in procuring purebred

[15] *Ibid.*, 11:191 (Aug. 28, 1829).
[16] *Ibid.*, 8:367 (Feb. 2, 1827).
[17] *Ibid.*, 9:50–51, 164 (May 4, Aug. 10, 1827).
[18] *Ibid.*, 15:401 (Feb. 28, 1834).
[19] Poore, *Biographical Sketch of John Stuart Skinner*, 19; *American Farmer*, 5:304 (Dec. 12, 1823).
[20] *Ibid.*, 9:264 (Nov. 2, 1827).
[21] Bertha L. Heilbron, "The American Turf Register and Sporting Magazine," *Minnesota History*, 14:421–424 (December 1933), and U. S. Department of Agriculture, Library, *Agricultural Library Notes*, 9:97–99 (March 1934); and Harry Worcester Smith, *A Sporting Family of the Old South* (Albany, N. Y., 1936), 16–24.
[22] *American Farmer*, 2:404 (Mar. 16, 1821).
[23] *Ibid.*, 15:321 (Dec. 20, 1833).

livestock.[22] On December 20, 1833, I. Irvine Hitchcock, who had become editor of the *American Farmer*, announced that a department of livestock breeding and management was being established as one of the regular features of the journal.[23] Stock breeders and dairymen promised to make contributions to this department.

The value of meteorological observations for agricultural activities was recognized in this journal. In a letter of March 6, 1824, Alexander Reed of Washington, Pennsylvania, suggested to Skinner that it would be desirable for the *American Farmer* to obtain and publish meteorological information from various parts of the United States for its readers. Reed pointed out that meteorology "has a close connexion with husbandry and might be highly serviceable to foreigners who contemplated settling in our country." Skinner agreed with Reed's contention and in 1824 began to publish summaries of meteorological observations made in Washington, Pennsylvania, Baltimore, Maryland, and other places.[24]

There was frequently a section or "department" of poetry in the *American Farmer*. Here were usually printed poems stressing the importance and benefits of agriculture and rural life. The following passage from a poem titled *An Eclogue on the Plough* typified the sentiment of most of this poetry:

> All hail, ye farmers, young and old!
> Push on your ploughs with courage bold;
> Your wealth arises from your clod,
> Your independence from your God.
> If then the plough supports the nation,
> And men of rank in ev'ry station,
> Let kings to farmers make a bow,
> And ev'ry man procure a plough.[25]

Some poems also stressed the virtues of temperance, frugality, industry, and other moral qualities.

Another pioneering feature of the journal was its Ladies Department. This was established in 1825 for the amusement and information of feminine readers whose interests were being ignored by the great majority of American periodicals. Ladies were invited to make contributions to this department. The hesitancy with which most women of the period engaged in literary activities was expressed early to the editor by a feminine contributer who inquired whether he had "positively interdicted all communications from farmeresses." She wrote: "I am no philosopher, our [women's] business, you know, is with plain duty and matter of fact, almost denied the faculty of reason, and positively forbidden to exercise what we have; hence a learned woman, you know, is the most odious animal in creation; and if a lady dare to read a word of natural philosophy, it is at the expense of never getting married."[26] Skinner's invitation to feminine readers and his general progressive editorial policy encouraged many women to contribute recipes, household hints, poems, and other material. Numerous articles appeared urging more educational opportunities for women and pointing out the contribution of women to the home and farm.

Although the *American Farmer* was supported by the patronage and pens of distinguished agriculturists in America and abroad, it failed to receive the support of the great mass of small farmers. Skinner and his successors constantly uttered the wish that more farmers could be persuaded to drop at least one of the several political newspapers they read and subscribe to the *American Farmer*. Many who subscribed were often delinquent in their payments. Moreover, support of the journal tended to dwindle as other agricultural papers with more sectional interest were established. By 1833 the number of subscribers was barely sufficient to pay expenses of publication.[27] Thus on March 7, 1834 it became necessary to discontinue publication, and the editor laconically stated: "In regard to the *wherefore* of this occurrence, suffice it to say, that it has been caused by one of those reverses of fortune which await all men, and overtake many."[28] However, after this development the journal reappeared later under several different titles. It ran through a dozen series before its end in 1897.[29]

All in all, the *American Farmer* was a successful venture. At the outset the number of subscribers exceeded the editor's expectation and were to be found in all the States and among nearly all sects and parties. Circulation was especially good in

[24] *Ibid.*, 6:22, 25 (Apr. 9, 16, 1824).
[25] *Ibid.*, 7:24 (Apr. 8, 1825).
[26] *Ibid.*, 1:19 (Apr. 16, 1819).
[27] *Ibid.*, 15:1 (Mar. 15, 1833).
[28] *Farmer and Gardener* (Baltimore), 1:1 (May 9, 1834). This journal, edited by I. I. Hitchcock, was the successor of the *American Farmer* series described in this article.
[29] Frank Luther Mott, *A History of American Magazines, 1741–1850* (New York, 1930), 153.

Southern and Western States. Significant stimulus was given to the agricultural press, for by 1834 at least fifteen agricultural journals, with aims similar to those of the *American Farmer*, had been inaugurated.[30] One of the best tributes to its achievement was uttered by one of these journals, the *Maine Farmer*, when it declared: "It has been a successful pioneer, and fearlessly led the way in the march of agricultural improvement."[31]

[30] Demaree, *The American Agricultural Press*, 38.

[31] Reprinted in *American Farmer*, 15:33 (Apr. 12, 1833).

# THE EARLY RANGE CATTLE INDUSTRY IN ARIZONA

RICHARD J. MORRISEY

*Division of History, University of California, Davis*

"No vaca, no mula, no caballo—todo á los Apaches" was the plaintive protest which greeted early American migrants who passed through what is now southern Arizona.[1] In the so-called golden era of Pimería Alta, lasting from 1790 to 1822 approximately, marauding Apaches had been pacified by gifts and rations. With the cessation of Spanish support after Mexican independence, money and food were inadequately and irregularly supplied to the presidios, and the Indian uprisings which ensued drove miners and ranchers southward, turning them away from Apache land. Mission San Xavier del Bac, the matrix of stock raising among the upper Pima tribes, was secularized in 1827, and until 1851 no priest resided there.[2] For all practical purposes the cattle industry in Arizona was dead. Over a century before, ranching had spread widely under the direction of the energetic Padre Kino; now the ruthless warriors of Apachería dominated the borderlands.

The Mexican government of Sonora had managed a precarious possession of Tucson and Tubac on the Santa Cruz River, but their population steadily declined. As haciendas were abandoned, great numbers of beef animals spread throughout the arroyos and over the hills to roam in a truly wild state, and Lieutenant-Colonel Philip St. George Cooke, marching through southeastern Arizona with a volunteer Mormon Battalion after the commencement of hostilities between the United States and Mexico in 1846, observed: "There is not on the open prairies of Clay county, Missouri, so many traces of the passage of cattle and horses as we see every day." He also commented with some surprise that although the grama grass on the hills was "a straw color, and looks dead . . . the thousands of wild cattle and horses are fat."[3]

With the discovery of gold in California and after the acquisitions of the Treaty of Guadalupe Hidalgo, long trains of emigrants began pushing their way west. One estimate suggests that 60,000 travelers crossed the Colorado River near the Gila junction before 1851.[4] In the relatively short distance between the Colorado and the Pima villages on the Santa Cruz, 200 wagons were counted in the early fall of 1849—all following the Gila toward the west.[5] The growth of population in California created a great market for beef, and the news was quickly carried to eastern ranges. Only Texas was equipped at this time to answer the demand, and in the early 1850s thousands of cattle were headed toward the Pacific. These longhorns could be purchased in Texas for $5 to $15 per head and sold at the journey's end for $60 to $150. The road was long, about 1,500 miles, and beset with danger and hardships. Comanches and Apaches preyed upon the herds, stretches of malpais left the stock lame, and at Fort Yuma the Colorado had to be crossed by swimming—a hazardous undertaking—or by utilizing the ferry at a cost of $1.50 per animal and $2.00 per man. However, in 1854 an estimated 9,000 head were trailed into California, while in the same year Apaches made away with an addi-

[1] Diary of Judge Benjamin Hayes, ms. in Bancroft Library, University of California, Berkeley.

[2] Lawrence F. Flick, "The Papago Indians and Their Church," American Catholic Historical Society of Philadelphia, *Records*, 5:410 (1894).

[3] 30 Congress, special session, *Senate Document 2* (serial 547, Washington, 1849), 36–37.

[4] Hubert Howe Bancroft, *History of Arizona and New Mexico, 1530–1888* (San Francisco, 1889), 486.

[5] Cave J. Coutts, Diary (ms. in Bancroft Library), 131.

tional 3,000 en route, valued at $75,000.[6] Although these Texas herds traversed Arizona, the local industry really did not revive until mining men came to reopen old Spanish workings and to prospect the promise of new fields. An added impetus was found in the establishment of military garrisons, seven having been situated in Arizona by 1862, for the protection of migrants and miners.

More than 40,000 square miles of desert and plain, rolling hills and mountains were purchased in 1853 from Mexico by James Gadsden for the United States. While this land long before had been initiated into the livestock industry, none of the Americans who preceded the flag into the area engaged in ranching on a large scale. Small herds of Mexican stock were held by such men as Bill Kirkland, Elias Breevort, Pete Kitchen, and Colonel Douglas, but probably the first attempt to improve the local strain was made by William S. Oury, a disappointed Argonaut, who purchased 100 Illinois heifers and 4 bulls in 1858 from a drover going to California.[7] To this herd he added 400 Kentucky cows in 1862, and in 1868 he brought blooded stock from Missouri.[8]

During the Civil War small herds of American cattle had been driven into Arizona, which had been made a territory apart from New Mexico in 1864, and after the war there was a tremendous stimulus to the livestock business. Herds in Texas had increased while the range had declined; consequently, when peace came, there was a desperate rush to relieve overburdened grazing lands. The trail movement to California was revived, and hundreds of discharged Texan veterans poured into Arizona.[9]

The four trails generally used followed old emigrant routes. One led into southern Arizona along the path blazed by the Mormon Battalion in 1846 through northernmost Sonora, up the San Pedro or Santa Cruz valleys to the Gila, and thence to the Colorado crossing. The second entered Arizona from New Mexico through Apache Pass and Fort Bowie, dividing into branches which led to various garrisons or on to California. From the San Francisco River to the Gila ran the third route, winding down the Gila until it, too, frayed into many tracks. The fourth, Beale's road, now followed by the Santa Fe Railroad and Highway 66, went due west from Albuquerque. After entering the territory, one path continued into California, while another went southward through Sunset Pass to Prescott and other army posts.

Although less significant, there was some movement of Utah cattle south through Kanab to the Paria Canyon Crossing of the Colorado, afterward known as Lee's Ferry. Importations from Mexico came through such ports of entry as Nogales or Bisbee, but that traffic was discouraged until 1871 by an ad valorem duty of 20 percent. In 1871, however, an act of Congress provided that stock intended for breeding could be admitted duty free, and thereafter the crossings were frequent.[10]

"There never has been such activity in securing eligible stock ranches in this part of Arizona as at present," noted the Tucson *Citizen* in 1873.[11] In Sulphur Springs Valley Colonel H. C. Hooker of the Sierra Bonita Ranch grazed 11,000 head of Texas cattle on a range roughly 27 miles in width and 30 miles in length, furnishing in 1872 more than 15,000 beef animals to supply the military establishments and Indian wards of the Government. At Canoa Ranch the firm of Marsh and Driscoll ran 400 head of Sonora stock, and there were at least a dozen small ranches on the Santa Cruz, each holding from 20 to 75 head. Southwest of Tucson the beautiful Patagonia country was opened by miners in 1878, and with them came ranchmen—Vail, Harvey, Sanford, the White and Ruelas brothers—who pre-empted grazing land. As early as 1854 the Redondo brothers had tried unsuccessfully to run cattle in the Yuma region, but in 1874 they brought a large herd up from their ranch in Sonora and ranged their stock from the mouth of the Colorado for a hundred miles to the northeast in a mesquite brush jungle which, after the summer rains, was covered with good forage.

To the north, the land was soon occupied by Mormon stockmen. Jacob Hamblin, apostle to the

[6] Ralph P. Bieber's Introduction, in Joseph G. McCoy, *Historic Sketches of the Cattle Trade of the West and Southwest* (Glendale, Calif., 1940), 25–27; and James G. Bell, "A Log of the Texas-California Cattle Trail, 1854," edited by J. Evetts Haley, in *Southwestern Historical Quarterly*, 36:51, 54 (July 1932).

[7] Clarence W. Gordon, "Report on Cattle, Sheep, and Swine. . . ," in U. S. Census Office, 10th Census, 1880, *Report on the Productions of Agriculture*, 3:1047.

[8] Frank C. Lockwood, *Pioneer Days in Arizona* (New York, 1932), 227; and C. C. Smith, "Some Unpublished History of the Southwest," *Arizona Historical Review*, 4(2):13 (April 1931).

[9] *Arizonan* (Tucson), Mar. 24, 1868.

[10] *U. S. Statutes at Large* (1869–71), 16:265; *Clarion* (Clifton, Ariz.), Aug. 22, 1883.

[11] Quoted in San Diego *Union*, Dec. 31, 1873.

Indians, started an enterprise at Houserock Valley in 1872, and not long afterward the Winsor Castle Stock Growing Company and the Moroni Cattle Company were established in the same area. A Mormon rancher, John H. Willis, was one of the first settlers to enter the rugged upper Tonto Basin, bringing a herd in there in 1878.

Except for occasional recalcitrants such as Geronimo, the Indians had been subdued and placed on reservations, and the immense grazing tracts and mild climate promised a flourishing industry. The construction of railroads gave further stimulus to settlement, promising easy access to eastern and western markets. In 1877 the Southern Pacific Railroad reached Fort Yuma, and by 1880 it had been extended to Tucson; the next year it connected with the Santa Fe at Deming, New Mexico, and thus completed the link between East and West. In the north, the Atlantic and Pacific began to lay tracks in 1882 and had reached the Colorado by 1883, opening up a tremendous area of top quality grassland.

The almost explosive expansion of the cattle frontier presaged changes on the range, and Will H. Barnes, a contemporary cowman, has accurately described the sentiments which met this influx:

> I well remember in 1885 the disgust which fell upon my own outfit, then located upon the Little Colorado River in northern Arizona, over the advent of a neighbor. Our nearest had been twenty-five miles distant, and the newcomer had the temerity to turn loose 1,000 head of west Texas heifers at a point fully twenty miles above us. Our own cattle seldom wandered more than five miles away from the rough camp where we had established ourselves. Between us and the new neighbor was an almost untouched stretch of grass land, and back of us lay a virgin country fifty miles wide with not a settler or a domestic animal on it. Nevertheless, we felt much aggrieved at the nerve of the newcomer to crowd in on us in that fashion, and for several months there was a hostile feeling between the two outfits.[12]

By 1884 almost every bit of permanent water had been pre-empted, and cattle were being imported from as far east as Maryland.[13] As the open spaces on the range were filled in, the need for a codified land law became more and more apparent. The territorial legislature had passed a law in 1864 protecting "squatters" in possessory titles to 160 acres of surveyed land or to a one-half mile square if unsurveyed.[14] A court decision later limited this law by interpreting that legal protection could extend only to those persons who intended to enter claims under American preemption laws.[15] The size of tracts thus conveyed were negligible when compared with the amount needed to maintain a profitable ranching enterprise. Title to water was secured under this law, however, and free use of the public domain characterized this early period. Relatively little acreage was claimed under either the Homestead or Desert Land acts,[16] but almost 8,500,000 acres of the Territory's finest grazing land were granted as subsidy to the railroads. Much of this eventually passed into the hands of the big companies, one in particular, the Aztec Land and Cattle Company, securing control of a range 90 miles long by 40 miles wide along the right of way of the Atlantic and Pacific between Holbrook and Flagstaff. This outfit, which was running 60,000 head in 1888, shipped 28 cars of 2-year olds to Kansas in 1889.

As an evergrowing competition for range and markets became apparent, the cattle ranching industry adopted more businesslike methods. Better blood in the herds and planned use of forage, it was realized, must replace the lavish practices of the passing era. High quality stock had been coming into the Territory in small quantites for many years, but two men, Colonel H. C. Hooker of Sierra Bonita Ranch and Colin Cameron of San Rafael de Zanja, were pre-eminently influential in improving blood lines in the southern part of Arizona. Soon after settling in the Sulphur Springs Valley in 1872, Hooker imported 18 fine American bulls from Illinois, 10 of which were Durhams. He next purchased 400 Oregon cows and some Alderney stock which were bred to the Durham bulls in an attempt to produce a blockier beef animal, but the experiment failed because the animals were unable to acclimate themselves to the range and the rough forage.[17] In further experiments he

[12] Will C. Barnes, *Western Grazing Grounds and Forest Ranges* (Chicago, 1913), 82.

[13] *Report of the Governor of Arizona*, 1896, in U. S. Department of the Interior, *Report, 1896*, 3:223.

[14] Arizona (Territory), Laws, Statutes, etc., *The Compiled Laws of the Territory of Arizona . . . 1864–1877* (Detroit, Mich., 1877), 573.

[15] *Davis* v. *Simmons*, in Arizona (Territory), Supreme Court, *Reports of Cases Determined by the Supreme Court of Arizona Territory from January, 1866, to January, 1884, Inclusive* (San Francisco, 1884), 26.

[16] *Statistical Abstract of the United States, 1882* (47 Congress, 2 session, *House Executive Document 72*, serial 2108, Washington, 1883), 146.

[17] *Weekly Arizona Citizen* (Tucson), Oct. 16, 1880; *Arizona Sentinel* (Yuma), Nov. 8, 1873.

bred Shorthorn and Devon bulls to Texas cows,[18] but as the results were not especially satisfactory he turned to Herefords. In the spring of 1876 he brought some Herefords from Beecher, Illinois, to Sierra Bonita,[19] and in 1884 he purchased 75 more purebloods from a Major Gentry of Sedalia, Missouri. Continuing to build up his stock, Hooker paid $30,000 to an Iowa breeder for 200 bull calves and not long afterward procured 60 mature bulls from another Iowa stockgrower.[20] Before many years had passed, 90 percent of his herd was white-faced.

Even before Colonel Hooker began breeding Herefords on a large scale, Colin Cameron had established near Patagonia what was to become one of the greatest Hereford breeding units in the United States. In November 1883, 60 8-month old bulls, were turned out to pasture.[21] Winter was approaching, and the young animals were unacclimated. The importer was subjected tosevere criticism; hardships of the Arizona range, the wiseacres predicted, would soon make away with the immature whitefaces. By the following spring, however, all 60 were alive and in good condition, having exceeded the most optimistic expectations. Unrivaled rustling ability, early maturing qualities, and prolific reproduction soon placed the Hereford breed in a favored position on the Arizona range.

In the country around Prescott a number of Mormon cowmen had brought in stock from Utah, and here the cherry red of the Devons predominated,[22] although the sale of "800 young cows, bulls, two year olds, yearlings, and calves, all either Durham, Brahma or cross between them and improved Texas stock," was reported in 1872.[23] J. H. Lee of the American Ranch near Prescott offered the services of the "best three year old bull west of the Rockies" in the same year.[24] So great was the enthusiasm for high quality cattle that the territorial legislature passed an act in 1885 requiring that service of one good American bull of graded stock be provided for every 25 cows or fraction thereof, and any person not conforming was subject to a fine of not less than $50 nor more than $500. Further legislation permitted a rancher to castrate any scrub bull which was off of his home range and running with brood stock.[25]

During 1883–84 a 3-year old steer would sell locally for 3½ to 4 cents per pound on the hoof. These good prices stimulated breeding so greatly that, for the first time, in 1885 the local markets were unable to absorb the output of Arizona ranges. As a result of this situation, the first shipment of fine graded stock was made to Kansas City by Colin Cameron, who received $27.40 per head for 500 3- and 4-year old steers.[26] The failure of local markets in 1885 and the consequent search for markets in the East came as the logical end of several decades of development.

As the supply of beef animals increased there had been a slow but continual downward trend in prices. Upon the saturation of the local market, stockmen turned to eastern outlets for succor, holding onto steers and she-stuff and waiting until the animals were mature and fat and would command a bigger price. In order to get more money for female calves, heifers, and cows, spaying was started in 1888, one veterinary surgeon, Dr. Daniel Grey, receiving an order from the Champion Cattle Company to spay 12,000 head.[27] The inevitable result of holding cattle to mature while calf crops added to the burden on grass was range deterioration. Virtually all fat stock had disappeared by 1886, and from that time to 1893 range-grown steers were sold at three years old to feeders on the West Coast and to the northeast.[28] Buyers from the long grass prairies of the Middle West and Rocky Mountain States came into Arizona toward the end of the 1880s looking for feeders, and they were heartily welcomed by the *Southwestern Stockman*, official organ of southeastern Arizona ranchers. Out of this part of the territory went 17,000 steers in the spring of 1889, destined for Montana and Kansas, where they were turned out to graze and fatten.[29]

Since the search for outside markets coincided roughly with the crossing of the Territory by railroad lines, most cattle left by rail. The crude facilities caused much complaint, and Colonel

[18] *Arizona Sentinel*, Nov. 8, 1873.

[19] Alvin H. Sanders, *The Story of the Herefords* (Chicago, 1914), 694.

[20] Frank C. Lockwood, *Arizona Characters* (Los Angeles, 1928), 129.

[21] *Report of the Governor of Arizona*, 1896, 227.

[22] Gordon, "Report. . . ," 1047.

[23] *Weekly Arizona Miner* (Prescott), Sept. 7, 1872.

[24] *Ibid.*, Oct. 26, 1872.

[25] *Laws of Arizona*, 1885, 83, 141.

[26] *Report of the Governor of Arizona*, 1896, 224.

[27] *Southwestern Stockman* (Willcox, Ariz.), Mar. 30, 1889.

[28] *Report of the Governor of Arizona*, 1896, 224.

[29] *Democrat* (Flagstaff), June 28, 1889.

Hooker declared that stock sent north by trail reached market in better shape than did those animals which were shipped.[30] After having been severely censured by a national stock growers' convention, railroad companies put 16 new-type stockcars into experimental service between Winslow, Arizona, and Kansas City,[31] and Burton cars, as they were called, proved successful, much to the relief of stockmen. In the new accommodations a steer lost only an average of 53 pounds for the journey of 1,196 miles, as contrasted to the average figure of 188 pounds shed in the old-style cars. Another source of grievance against railroads was high shipping charges. Frequently the sale of a herd would leave no profit after the freight charges had been deducted; for example, a range steer sold in San Francisco in this period would bring $16, of which the shipping cost consumed about half.[32] These and other factors inclined ranchers to look with hostility upon the Southern Pacific and Atlantic and Pacific roads.

Whenever the market declined, these railroads became involuntary buyers of livestock. Officials crassly asserted that stock growers salted the right-of-way, but in any case a surprisingly large number of animals were struck by trains. Captain Henry, a Southern Pacific claim agent, declared that engineers of his line were connoisseurs of stock because they invariably chose thoroughbreds to strike, asserting in addition that more thoroughbreds had been killed than had been brought into the country.

Opening of the Salt River Valley by rail was achieved in 1886, and an area of rich forage was thus provided where animals were turned out to fatten on irrigated fields of alfalfa. Hooker and Vail, the latter of Empire Ranch, were influential in organizing the use of the valley, and in 1889 Hooker shipped 18 carloads of prime stock from Phoenix to San Francisco.[33] There was a stiff charge for forage which sometimes worked to the owner's loss,[34] but by 1896 30,000 head of finished beef animals were turned off the valley annually.[35] Fortunately, the feed supply came in the autumn, bringing the fattening period to a close in late winter or early spring, at a time when Pacific Coast markets were willing to pay a premium for beef.[36]

The last years of the decade ending in 1890 were truly the heyday of Arizona's range cattle industry. Enthusiastic promoters drew lurid word pictures of easy wealth, and miners, stockmen, adventurers, and riffraff flocked into the Territory. Stock growers hardly could be censured for succumbing to extravagant descriptions of "unsurpassed facilities for grazing" where "expense was reduced to a minimum," and where "not an acre of grassland . . . is unavailable for raising stock because there is a lack of water."[37] And many an indolent man with money to invest must have been attracted by the imagery which claimed that: "Here the climate is almost perpetual spring, and even in the dryest season the feed never fails, and the owner can sit under the shade of his comfortable hacienda and see his herds thrive and increase winter and summer."[38]

While such advertising drew many eager easterners and ambitious capitalists into Arizona ranching, even sober veterans of the range were heedlessly riding the crest of a wave soon destined to break. In the Santa Cruz Valley, for 50 miles south of Tucson, there were 8,500 cattle pastured, and the whole of Pima County supported over 150,000 head of stock. Yavapai County alone had 1,035 brands registered, practically every acre of range being occupied.[39]

It was nearly catastrophic when an unprecedented calf crop was dropped on the overstocked range in 1891. When summer rains failed in the same year the situation became crucial. Official assessment showed 720,941 head of cattle located on the Arizona range, while unofficial estimates by experienced ranchers put the number nearer to 1,500,000. During the fall and winter of 1891 and the spring of 1892 many animals died, but still no very great apprehension was felt. Again, however, the summer rains failed. Clearly, it was imperative

[30] *Southwestern Stockman*, Jan. 18, 1890.

[31] U. S. Bureau of Animal Industry, *Reports, 1887–1888*, 333–338.

[32] *Southwestern Stockman*, Jan. 18, 1890.

[33] *Ibid.*, Mar. 30, 1889.

[34] *Ibid.*, Mar. 16, 1889. In this year the charge rose to $1.00 per month. *Ibid.*, Mar. 30, 1889.

[35] *Report of the Governor of Arizona*, 1896, 315.

[36] Arizona College of Agriculture, Agricultural Extension Service, *Extension Circular 59* (Tucson, 1929), 90.

[37] H. C. Stinson, *Arizona, A Comprehensive Review* (San Francisco, 1891), 26–27.

[38] Patrick Hamilton, *The Resources of Arizona* (San Francisco, 1883), 170.

[39] *Southwestern Stockman*, Jan. 11, Mar. 23, 1889, Jan. 27, 1890.

to move the bulk of the stock off perishing grass or the whole industry would be doomed. By fall most of the herds had been sent to Texas, Indian Territory, Kansas, California, Nevada, and Oregon. In southern Arizona the loss totaled between 50 and 75 percent of the ranching investment. On July 15, 1893, rain fell; 60 days delay and almost every animal remaining below the Gila would have perished. In 1894 and 1895 came fairly good years. Fortunately, summer and annual grasses managed to reseed and furnished adequate forage. Stock recuperated well, but a shortage of bulls forced the calf crop from a normal 90 percent down to 20 percent in 1893.[40]

During this period of distress, prices dropped considerably.[41] As early as 1889 Colonel Hooker was selling graded cattle at $8 per head, and in 1892 the Black Range Cattle Company sold out for $5 per head.[42] These difficulties, harsh as they were, conferred certain benefits upon Arizona ranchers. First, the realization was brought home with emphasis that stock raising had become an involved procedure; an adventure had become a business. Second, planned use of range and water was necessary. Tame feed had to be planted and experimentation undertaken to determine the hardiest and most nutritious forage. Having learned these lessons, the industry turned to more scientific husbandry and subsequently recouped its losses.

[40] *Report of the Governor of Arizona*, 1896, 224–225.

[41] This condition was coincidental with widespread depression in the cattle industry of the United States. After reaching a high peak in 1885, prices steadily declined. Between 1891 and 1894 prices were extremely low both in market value (dollars per head) and in value relative to other commodities. By 1895, however, the cycle took an upward swing and presaged an era of prosperity. For a statistical presentation, see Edwin C. Voorhies and A. B. Koughan, *Economic Aspects of the Beef Cattle Industry* (California Agricultural Experiment Station, *Bulletin 461*, Berkeley, 1928), 68–69.

[42] *Southwestern Stockman*, July 13, 1889, Aug. 13, 1892.

## EXPERIMENTS IN TEA PRODUCTION IN THE UNITED STATES

NELSON KLOSE

*Central State College, Edmond, Oklahoma*

Tea production long attracted the attention of agriculturists in the United States.[1] The desire to make the country self-sufficient with respect to its tea supply motivated the efforts to found the tea industry. It was argued that the considerable quantity of tea consumed by our citizens should be grown and processed within this country. It was urged that money spent for this and other imported commodities should be retained in the United States, that the country should not be dependent upon foreign political contingencies for important staples, that the balance of trade would be in our favor if we imported fewer commodities, and that national self-sufficiency should be promoted. Tea would add to the diversity of southern agricultural crops, increase employment in the South, and augment the national wealth.

In spite of the well-known impracticability of the use of high-priced labor in the production of tea, these efforts were not abandoned until a recent date. Efforts to compete with foreign sources in the quality of the product and in the cost of production failed repeatedly. Meanwhile tea had had many enthusiastic supporters, including several Commissioners of the Patent Office and of the Department of Agriculture.

The first person known to have grown tea in the United States was André Michaux, the French botanist. About 1800 he set out tea plants at Middleton Barony on the Ashley River some 15 miles from Charleston, South Carolina.[2] In 1823 a leading periodical reported that "genuine Hyson tea" had been cultivated in North Carolina from a viable seed found among tea leaves.[3] This is

[1] This article is based on the author's treatment of this subject in his doctoral dissertation, Foreign Plant Introduction by the Federal Government: A Study in American Agricultural History, University of Texas, 1947. For the history of the foreign plant introduction work of the Federal Government of the United States, see the author's book, *America's Crop Heritage* (Ames, Iowa, 1950).

[2] George F. Mitchell, *The Cultivation and Manufacture of Tea in the United States* (U. S. Bureau of Plant Industry, *Bulletin 234*, Washington, 1912), 7.

[3] *Niles' Register*, 24:213 (Baltimore, June 7, 1823).

surprising, to say the least, since, at a later date it proved impractical to import the seed in a viable condition because the oily seed nearly always turned rancid during the long voyage to America. In the same year a bed of tea shrubs of considerable extent was reported to be growing in Louisiana, and a specimen of tea "raised in the south. . . on repeated trial was found to be palatable and refreshing." The doubtful practicability of tea cultivation was understood by this reporter who considered conditions for cultivation in the United States as favorable for the tea plant as in China but feared that the labor of Americans could be employed more profitably in other pursuits.[4] In 1825 it was stated that tea the equal of the best China tea was being produced to a considerable extent in Louisiana.[5] In 1828 it was reported that the tea plant had been grown for the previous fifteen years near Charleston, South Carolina.[6] Yet in 1837 the editor of the *Genesee Farmer* asked that shipmasters in the China trade introduce the tea plant.[7] Dr. Henry Perrine, recipient of a federal land grant in Florida for his work in plant introduction, earlier had proposed the cultivation of tea in the South.

Interest in tea cultivation in America in the middle of the nineteenth century was stimulated from time to time by the success of tea plantings in India by the British East India Company during those years. Dr. Junius Smith, credited with conducting the first experiment in growing tea for agricultural and commercial purposes in the United States, imported plants of seven years' growth in 1848 to the farm he procured for this purpose near Greenville, South Carolina.[8] Smith's horticultural interests were focused on the tea plant by a letter from his daughter residing in northwest India where her husband was stationed as a chaplain with the British army. Smith, a pioneer promoter of steam-propelled ocean vessels who had just failed in his efforts to secure a mail contract from Congress to subsidize his proposed line to Europe, immediately undertook to study tea production in the United States. He chose the hills of western South Carolina as best suited climatically for the tea plant. His plants and seeds were procured from London and from India.[9] The Patent Office boosted Smith's work and recorded the introduction in anticipation of the future interest in the "enterprising projector" and benefactor of his countrymen. Smith's work was also publicized by farm papers and by his own pen.[10]

In the enterprise Smith soon had assistance that he did not want. Thomas Eubank, Commissioner of Patents, wrote Smith on May 29, 1849, to secure information for his office on the culture of the tea plant.[11] The Patent Office soon obtained tea seed for distribution and sent these out in 1850. Senator John C. Calhoun transmitted a small packet of the seed to Smith, his friend and former classmate at Yale. Smith complained to the Patent Office that he did not require the assistance of the government in introducing the tea plant into the United States. "I think," he wrote, "upon reflection you will perceive that a gratuitous distribution of Tea Nuts by the government is a great injustice to me. I have spent more than three years in the labours of introducing the cultivation of the Tea plant into this country and expended a large amount of money." He added that he intended to "look to the public for remuneration, and to sustain him in the heavy expenditure incident to so large an undertaking."[12] This protest was one of the earliest objections to government free seed distribution. In January 1853, Smith's violent death, probably resulting from his antislavery views, brought this ex-

[4] *Ibid.*, 25:152 (Nov. 8, 1823).

[5] *Ibid.*, 27:400 (Feb. 19, 1825).

[6] William Saunders, *Tea-Culture as a Probable American Industry* (U. S. Dept. of Agriculture, *Special Report 18*, Washington, 1879), 15.

[7] *Genesee Farmer and Gardener's Journal*, 7:33 (Rochester, N. Y., Feb. 4, 1837).

[8] U. S. Patent Office, *Report, 1848, Agriculture*, 168–169; *ibid., 1849, Agriculture*, 402–404.

[9] E. Le Roy Pond, *Junius Smith; A Biography of the Father of the Atlantic Liner* (New York, 1927), 235. Smith received 500 plants from London in February 1849, and seed from India at the same time. *Genesee Farmer*, 10:47 (Rochester, N. Y., February 1849).

[10] Junius Smith, *Essays on the Cultivation of the Tea Plant in the United States of America* (New York, 1848). This exposition was written before Smith began actual cultivation; it urges the suitability of the American climate and describes the tea plant and its cultivation.

[11] Smith to Eubank, June 12, 1849, in Letters, Reports, and Essays of the Agricultural Section of the Patent Office, 1839–1860, vol. 1, Department of Agriculture Archives, in the National Archives, Washington, D. C. This collection is cited hereafter as Letters, Reports, and Essays.

[12] Smith to Eubank, Apr. 11, 1850, *ibid.*, vol. 2.

periment to a sudden close but not before he had brewed and enjoyed tea from his own plants.[13]

In May 1851, the Department of the Interior pressed the navy into the service of tea by requesting of William A. Graham, Secretary of the Navy, the cooperation of war vessels in transporting seeds from the East Indies.[14] Graham wrote Captain John H. Aulick, appointed to command the United States squadron in the East India and China seas, that "in the course of your cruise, it may be in your power to add to the agricultural interests of your country, by procuring . . . rare plants and seeds, particularly the Tea plant, such as are adapted to our Climate and soil and useful for domestic purposes."[15] In November 1852, Aulick informed the Secretary of the Navy that: "I have written to our Consul at Canton, in reference to the Seed of the Tea Plant and have his assurances that it shall be procured and forwarded . . . to . . . the Department of the Interior."[16] Nothing came of this effort.

Charles Mason, as Commissioner of Patents, gave no special attention to the tea plant until 1857. In a report on plants deemed worthy of introduction Mason considered it desirable for home consumption. It was believed that with the invention of machinery for processing the tea and with our advantages of superior transportation, more skilled labor, and cheap slave labor, we could compete with the Asiatics. For the guidance of American growers he included a description of Chinese practices of cultivating and harvesting tea.[17] Other attempts having failed, Mason initiated correspondence in 1857 which secured the services of Robert Fortune in procuring the tea plant from China for the Patent Office.

Robert Fortune was an able plant explorer and the first to be employed by the United States in Asia. He had already acquired a reputation for his services to the British Empire by having spent three years in the interior of China collecting seeds and plants of great value for the horticultural society in London. In 1848 he was employed by the British East India Company to revisit the tea districts to procure tea seeds for planting in the Himalaya region.[18] This was the beginning of the successful tea industry of northeastern India. Commissioner Joseph Holt, Mason's successor, sent Fortune to China in the belief that a new agricultural industry would be founded in the South. Meteorological and geological studies had been made to determine the areas most similar to the native environment of the plants to be imported.[19]

The Patent Office negotiated with Fortune for his services through the seed firm of Charlwood and Cummins of London.[20] Fortune's offer to work for the Patent Office under the same terms he had made with the East India Company were accepted; his salary would be £500 per year with all expenses paid.[21] The Patent Office asked him to collect other seed in addition to tea.[22] Fortune planned to sail from England for China on March 4, 1858.[23] From Shanghai in August 1858, he wrote that he had arranged for the collection of large supplies of tea and other seeds and plants.[24] By December Fortune had consigned the seeds of tea to the Patent Office.[25] In January 1859, he wrote that he had shipped two cases of plants and seeds aboard the *Nabob*, a "fine ship" bound for New York.[26] But Holt suddenly dismissed Fortune before he had time to come to America. He probably decided the plants needed no further expert care.[27]

The tea seed, planted in Wardian (glass) cases,

[13] Pond, *Junius Smith*, 266.

[14] Alexander H. H. Stuart to Graham, May 26, 1851, in Naval Records Collection, Executive Letters, January–May 1851, Office of Naval Records and Library, in the National Archives, Washington, D. C.

[15] Instructions from the Secretary of the Navy to Captain John H. Aulick, May 31, 1851, Record of Confidential Letters, No. 2, Mar. 1, 1849–Feb. 28, 1853, and Aulick to Graham, May 14, 1852, East India Squadron, May 1, 1851–Mar. 18, 1853, in *ibid.*

[16] Aulick to J. P. Kennedy, Nov. 22, 1842, in *ibid.*

[17] U. S. Patent Office, *Report, 1855, Agriculture*, xlii–xlviii.

[18] Fortune described his experiences in *Three Years Wandering in the Northern Provinces of China* (1847), *A Journey to the Tea Countries in China* (1852), and *Yeddo and Peking: A Narrative of a Journey to the Capitals of China and Japan* (1863).

[19] U. S. Patent Office, *Report, 1857, Agriculture*, iv–v; Donald Culross Peattie, *Cargoes and Harvests* (New York, 1926), 103.

[20] Fortune to Charlwood and Cummins, Aug. 7, 1857, and Charlwood and Cummins to Mason, Aug. 14, 1857, in Letters, Reports, and Essays, vol. 16.

[21] Charlwood and Cummins to Mason, Aug. 20, 1857, *ibid.*, vol. 16.

[22] Fortune to Holt, Nov. 19, 1857, *ibid.*, vol. 17.

[23] Fortune to Holt, Mar. 1, 1858, *ibid.*, vol. 20.

[24] Fortune to Holt, Aug. 10, 1858, *ibid.*, vol. 20.

[25] Fortune to Holt, Dec. 14, 1858, *ibid.*, vol. 20.

[26] Fortune to Holt, Jan. 22, 1859, *ibid.*, vol. 21.

[27] Fortune expected to be paid 6 months salary for Holt's sudden change of mind. Fortune to Holt, May 24, 1859, *ibid.*, vol. 21.

flourished and had grown to a height of 18 inches when removed from the cases in Washington. In 1859, 30,000 well-rooted tea plants were ready for distribution in the South or to gardeners in the North who could offer the plants the protection of a greenhouse. The Patent Office in 1860 expected to continue to supply the demand each year to insure a fair trial. It was expected that the substitution of steam power and machinery for hand labor in the preparation of the leaf might even make it an article of export.[28] The dissemination of the tea plants formed a prominent feature of the work of the agricultural division of the Patent Office until the Civil War interfered. The United States Department of Agriculture, created in 1862, had no communication during the war with most of the areas where the tea plants were being tried but continued the propagation of plants.

Isaac Newton, Commissioner of Agriculture under President Lincoln, did not include the tea industry prominently among his many other interests and merely supplied requests for the plants. Tea culture in British India was still watched with interest, and labor-saving devices adopted there encouraged the hope that tea might be profitable in the United States. Fresh supplies of seed from Japan led to the distribution of more thousands of plants by 1867, but after that year distributions were propagated from stocks secured originally by Fortune.[29]

After the Civil War a paper in the annual report of the Department of Agriculture recalled that the Southern States were congenial to the tea plant,[30] but it observed that commercially they could not compete with the cheap labor of China.[31] At the same time in California some excitement over the cultivation of Asiatic plants by Japanese colonists concentrated on tea cultivation. Several hundred Japanese were reported settling with the intention of growing tea;[32] they set out 140,000 plants at El Dorado.[33] By 1872 the now experienced tea growers in California concluded that the climate there was unsuited to the plant.[34]

The Department of Agriculture had not abandoned hope for the tea industry in 1873 under Commissioner Frederick Watts, although high labor costs, as always, continued as the greatest problem.[35] In spite of this a new interest developed in 1875. The Department's arboretum increased annually the number of plants distributed and received encouraging reports from sizable plantings in widely scattered points in the South.[36] The following year the reduced appropriation for the garden prevented further introductions, but 20,000 plants were distributed. Even conservative William Saunders now believed tea would become widely cultivated.[37]

When William G. Le Duc succeeded Watts in 1877, he confidently accepted from his predecessor the challenge of the tea industry. Because he believed that American tea could be put on the world market,[38] he distributed over 100,000 plants during 1877 and 1878, and 120,000 plants were prepared for distribution in 1879.[39] South Carolina and Georgia were indicated as favored centers for tea cultivation.[40] The tea plant was publicized by the Department of Agriculture, and information regarding its cultivation in China was supplied.[41] The unemployment of 1877 was cited as proof that labor was available for tea production in America.[42] Plants were distributed to increase the dissemination and to find the most favorable climates. Invention was expected to provide machines for processing the leaf. But even without machines it was thought that every family should prepare its own tea supply. In 1878, 46,750 tea plants were distributed, in 1879, 69,154, and in 1880, 70,000.[43]

[28] U. S. Patent Office, *Report, 1859, Agriculture*, iii; *ibid., 1860, Agriculture*, 15.

[29] Saunders, *Tea-Culture . . .*, 6.

[30] U. S. Dept. of Agriculture, *Report, 1869*, 235; *ibid., 1870*, 170.

[31] *Ibid., 1869*, 18.

[32] U. S. Dept. of Agriculture, *Monthly Report*, May–June 1869, 241.

[33] T. A. Kendo, *Silk and Tea Culture and Other Asiatic Industries Adapted to the Soil and Climate of California* (San Francisco, 1870), 64.

[34] U. S. Dept. of Agriculture, *Report, 1872*, 449.

[35] U. S. Dept. of Agriculture, *Monthly Report*, August-September 1873, 436–440.

[36] U. S. Dept. of Agriculture, *Report, 1875*, 10.

[37] *Ibid., 1876*, 9, 70.

[38] *Ibid., 1877*, 9.

[39] Saunders, *Tea-Culture . . .*, 6.

[40] U. S. Dept. of Agriculture, *Report, 1877*, 8–9.

[41] *Ibid.*, 349–362; [A. C. Jones], *Thea Viridis, or Chinese Tea Plant, and the Practicability of Its Culture and Manufacture in the United States* (U. S. Dept. of Agriculture, *Special Report 3*, Washington, 1877). Testimonials from growers included in the preceding citation show that many plantings of an acre or so were under cultivation.

[42] U. S. Dept. of Agriculture, *Report, 1877*, 48–51.

[43] *Ibid., 1878*, 90, *1879*, 27, and *1880*, 16, 22.

The climax of the tea enthusiasm was reached in 1881. Congress provided $5,000 "to be devoted to experiments in connection with the culture and manufacture of tea" in 1880, and another appropriation of $10,000 was made the following year.[44] With these funds an experimental tea farm was established at Summerville, South Carolina, and Commissioner Le Duc explained:

> Acting under authority of Congress, I have selected, after a careful examination, with the aid of Mr. [John] Jackson's experience, a tract of land suitable for an experimental farm on which the raising of tea on an extended scale will be carefully and thoroughly tried. Of the result there can be no reasonable doubt. American tea, grown and manufactured on our own soil by ourselves, is destined at no late day to supply the demand of our own people and to enter the world's market in favorable competition with that produced by any other country.[45]

At the solicitation and on the advice of Le Duc, John Jackson, a native of Aberdeenshire, Scotland, attracted by publications of the Department of Agriculture on tea, visited the South and became convinced tea could be made to compete on a basis of price and quality in the markets with that grown in foreign countries. Jackson, who had fourteen years previous experience in the manufacture of tea and in perfecting machinery for processing tea, purchased the estate of Dr. Jones in Liberty County, Georgia, on which neglected tea plants were growing from shrubs set out by Jones about 1850.[46] From a dense mass of plants growing there Jackson set out a tea garden of 160,000 plants occupying 40 acres. Samples of tea were sent to tea distributors in the United States and in London. Jackson was placed in charge of the tea farm at Summerville. New seeds were obtained by importations from Japan, India, and China.[47]

The end of this venture came quickly. In 1881 George B. Loring succeeded Le Duc as Commissioner. Loring, not sharing Le Duc's enthusiasm for tea and not believing that climatic conditions were favorable to it, directed Wiilliam Saunders to examine the Department's tea plantation at Summerville. Saunders' dissatisfaction with Summerville was obvious. He found only 15 acres of poor land cleared for cultivation, and the tea plants were not thrifty; he advised cutting the appropriation. He wrote:

> In a general way it may be stated that since July 1, 1880, $15,000 have been appropriated by Congress for the encouragement of tea culture. So far as is visible to the ordinary observer, the only practical, palpable result of expenditures from this fund is what is to be found and what has been done on this farm.[48]

Saunders concluded that good quality teas could not be produced in the South. He pointed out that a warm climate with much summer rainfall—which the South lacked—was needed to produce a strong, well-flavored tea. Jackson's own plantation in Georgia had not produced teas of sufficient strength.

The experiments were continued at Summerville, but the Department distributed fewer plants than in previous years, and these were only to encourage production for the grower's own consumption.[49] The tea farm in South Carolina was closed in 1887.[50] The only results achieved had been that some hundreds of households had grown their own tea.[51]

In spite of past experiments Secretary of Agriculture Jeremiah M. Rusk revived the tea experiments in 1889. He believed the previous experiments with tea culture had been arrested before reaching any definite conclusion and that better cultivation and preparation might bring success. Seed from the best tea in Asia were secured through the Department of State. Special attention was given to climate as a limiting factor in the production of good quality tea. Merchants took an interest in the samples produced, tea tasters judged the brews, and the press published reports on the progress made. The Department of Agriculture began cooperating with Dr. Charles U. Shepard, in charge of his own Pinehurst Experimental Tea Garden, near Summerville, South Carolina. Varie-

[44] Acts of June 16, 1880 and Mar. 3, 1881, in *U. S. Statutes at Large*, 21:292, 383.

[45] U. S. Dept. of Agriculture, *Report*, *1880*, 22–23, 625–627.

[46] Typewritten copies of Jackson's Letters, January–June 1880, to William G. Le Duc, Commissioner of Agriculture, in U. S. Dept. of Agriculture Library.

[47] U. S. Dept. of Agriculture, *Report*, *1880*, 22, 625–627; *ibid.*, *1881–1882*, 28–29; George F. Mitchell, *Home-Grown Tea* (U. S. Dept. of Agriculture, *Farmers' Bulletin 301*, Washington, 1907), 7.

[48] U. S. Dept. of Agriculture, *Report*, *1881–1882*, 20–21.

[49] *Ibid.*, *1881–1882*, 678, and *1883*, 4–5.

[50] *Ibid.*, *1887*, 41; *U. S. Statutes at Large*, 24:104.

[51] U. S. Dept. of Agriculture, *Report*, *1889*, 123.

ties from Japan, China, Formosa, and Assam were tried at Pinehurst. Because the cost of picking a pound of tea at Pinehurst proved to be six times greater than the cost in the Orient, any tea marketed had to compete only on a basis of quality with expensive foreign teas. But testimonials of tea merchants praised the tea as equal to the best foreign teas.[52]

The commercial production of tea for a fifth time was presented as a tantalizing possibility in 1899 when, judging by publications of the Department of Agriculture, a new wave of interest occurred. This time it was Secretary of Agriculture James Wilson who promoted the industry. Dr. Shepard was cultivating about 60 acres of tea, and with all necessary machinery furnished by the Department he processed tea which he sold to a distributing house in the North at a profit. In 1900 a company with assets of $50,000 was being organized to produce tea on an extensive scale. Much experimenting was done to improve the quality of the tea which could be produced and marketed for 15 cents per pound, it was claimed.[53]

By 1903, when 8,369 pounds of tea was produced at Pinehurst, attention by the Department of Agriculture came to be concentrated more than ever on reducing costs of processing the leaves by the invention of labor-saving machinery. The time of experiment with new imported seeds was past, and our climate was accepted as suitable. Attention was given to the cup qualities of tea as affected by chemical changes during processing. A tea garden was being cultivated at Mackay, Texas, in 1903 in order to test the plant in that climate.[54] In 1905 Dr. Rodney H. True, in charge of the tea culture investigations, continued work along lines of the two previous years.[55] Dr. Shepard had about a hundred acres planted to tea at Pinehurst in 1907 and previously had been harvesting annually about 12,000 pounds of dry tea.[56] By 1906 another tea garden, opened at Pierce, Texas, indicated that the Texas climate would produce a strong brew,[57] but recurrent floods brought the abandonment of this experiment by 1909.[58] In the same and in the following year it was reported that tea produced found a ready sale in America, but work to lower costs continued.[59] In 1911 George F. Mitchell had introduced successful pruning machinery, and machine picking was being tried. Other encouraging results reported in 1912 concluded abruptly the mention of the tea experiments in the publications of the Department of Agriculture. Efforts of a century have not yet established an American tea industry. The higher costs of production have not been sufficiently reduced.

[52] *Ibid.*, *1892*, 627–640.
[53] *Ibid.*, *Yearbook*, *1900*, 43–44.
[54] *Ibid.*, *1903*, 43–44, *1904*, 30.
[55] *Ibid.*, *1905*, 49; Rodney H. True, "Tea Culture in the United States," *American Monthly Review of Reviews*, 34:327–332 (September 1906).
[56] Mitchell, *Home-Grown Tea*, 8.
[57] U. S. Dept. of Agriculture, *Yearbook*, *1906*, 54.
[58] *Ibid.*, *1908*, 305–306; *ibid.*, *1909*, 74.
[59] *Ibid.*, *1908*, 58, *1909*, 74, *1910*, 59.

## THE CHILEAN HORSE

ROBERT M. DENHARDT

*Western Horseman, Colorado Springs, Colorado*

Many people know something of the Criollo horse of Argentina, Brazil, and Uruguay, but relatively few have heard of the Chilean horse. This is due to several factors, but primarily to the excellent propaganda prepared by the Argentine Criollo breeders, and to A. F. Tschiffely's great ride from Buenos Aires to New York on the back of two gallant Criollos. However, the Chilean breed is far older and perhaps even better organized than the Criollo of Argentina, Brazil, or Uruguay. The Chilean horse has been a distinct breed for a great many years and has had a studbook since 1893.

Before discussing the evolution and history of this Chilean horse it might be well to describe the characterists of *El Caballo Chileno* as he is called. As described in the official Chilean studbook,[1] the standard is divided into two parts, the general characteristics and the race characteristics. It is interesting to note that the faults of the horse are mentioned in the official standard and that improvements are suggested. Most standards in the

[1] Sociedad Nacional de Agricultura de Chile, *Stud book de la raza chilena desde el no. 1–6550* (Santiago, Chile, Imprensa "La Illustracion," 1937), 13–14.

United States admit no faults. A translation of the standard follows.

In general characteristics the Chilean horse is a muscular horse, strongly built, but agile and rapid in all his movements. The measurement of his body (passing over his withers and going under, just behind his forelegs) varies from 63½ inches (1.62 meters) to 71½ (1.82 meters), depending on his height, which varies between 13.2 (1.38 meters) and 14.3 (1.50 meters) hands.

The specific characteristics of the Chilean horse are as follows. Although any color may be found, the horse is generally a solid color with a little white on the head and legs. The hair is usually heavy, with the mane abundant and wavy. Very little hair is found on the fetlocks. The head is light, of medium length, and he has a broad flat forehead. The profile is straight or slightly convex. The eyes are bright and slightly covered by the upper eyelids. The ears are small and mobile. The neck is of medium size, wide at the base and firmly inserted into the shoulders. It is slightly curving in its upper line, full and almost rectangular in the lower part, and fine in its union with the head. The withers are generally too low, short, and hidden in the muscles. This fault should be improved following the pattern of a good saddle horse. It should be more prominent but without the exaggeration of certain other light breeds. His shoulders are strong and muscular but at times too short and straight. Length and slope of shoulder are indispensable in any good saddle animal that has agility and movement.

The chest is broad, muscular, and well rounded with a good distance between the shoulder blades. The back is also well muscled, although at times a trifle long and low where it meets the withers. It should always be strong, short, and well rounded, generous at the withers, at the loin, and at the croup. The loin is ample, muscular, and strongly united to the croup (generally in a straight line, although at times slightly curved). The croup is large, full, and slightly sloping. The base of the tail is a bit low. The tail should always be carried flowing, or slightly lifted. The trunk is strongly developed, with finely arched ribs, well rounded belly, and short full flanks. The forearm is large, straight, and well tapered, with the elbow independent of the frame, all strongly muscled. The knee is strong and broad; the canon is moderately long and relatively slender. The legs should be ample when viewed from the side, with strong free tendons. With regard to the hind legs the thigh is well muscled, the quarters are large, and the leg well muscled inside and out. It is a characteristic of the race to move with hind legs rather far apart. This quality shows strength and energy but should not be be abused or the harmony of movements will be lost.

The fetlocks should be small, round, and with very little hair. The pastern is short and strong, with sufficient slope to give elasticity. The hoof is relatively small and high, with a concave bottom and with the frog not overly developed. His temperament is docile, but energetic notwithstanding.

The origin of horses in Spanish American countries is well known, as there were no horses there before the coming of the Spaniards. The conquistadores brought with them the horses that proved so essential in the conquest of the New World. They were acclimated in the Caribbean region, Mexico, and Central America, and from there followed the conquistadores wherever they went. They were indispensable collaborators in the occupation of the New World.

There is no reason to doubt and in most cases the historical documents state that the horses brought to America came from the Castilian, Andalusian, and Navarrese breeders of Spain. These breeders furnished the Spanish army with the numerous remounts needed for the vast warfare carried out by Spain in both Europe and America. During that era, the fifteenth and sixteenth centuries, the Spanish horses were with good reason esteemed as the best available. Without going into the obscure problem of the formation of the varieties now referred to as Andalusian and Castilian, we can say that they represent for the most part the origin of the horses that populated Spanish America.

The type of horses brought to the New World by the conquerors luckily complied almost perfectly with all of the requirements that arose in a hard life which almost continuously involved tremendous expeditions and arduous campaigns. The virtues and adequacy of the horses are written in the story of the successful conquest and colonization of the New World.

The first horses were introduced into Chile in 1541 by the conquistador, Don Pedro de Valdivia. They were obtained in southern Peru where they had been brought originally by Francisco Pizarro. He had gotten them for the most part in Panama although Alvarado brought him some from Mexico. One writer on the subject has stated that the Chileans obtained some horses from Argentina where they had been brought by the Adelantado Pedro de Mendoza,[2] although it seems much more likely that Argentina obtained many of her original horses from Chile.

[2] One of the best histories of the Chilean horse is found in the excellent work of Uldarico P. Prado, *El cavallo chileno, 1541–1914* (Santiago, Chile, Imprenta Santiago, 1914).

Don Pedro de Valdivia had 70 or 75 horsemen and about an equal number of foot soldiers in his original expedition. He undoubtedly also had pack horses, the majority of which may well have been mares as the men preferred to ride stallions, and there were enough horses at that early date to make unlimited choice possible.

The gathering of these horses is reported to have been done around Charcas, Peru. Since this province is known to have been one of the first selected and since it contained fertile valleys and stock ranches, the statement seems logical. Some three years later Don Alonzo de Monrroy also gathered 70 more horses in this region and took them to Chile.

In 1546 eight Spaniards arrived in Serena with 10 brood mares from Charcas. In 1547 Garcia de Caceres and Diego de Maldonado brought 60 mares to Chile from the same province. In 1548 Valdivia imported 80 horses from Cuzco. In 1551 Francisco de Villagra came to Chile from Charcas with 400 horses. When a rough summary of known importations is made, it becomes evident that there were from 300 to 400 mares available for breeding purposes at a relatively early date, and most of these came from the province of Charcas.

By 1603 horse breeding was firmly established in the rich valleys where the extensive ranches of the colonizers of Chile were found. They were still quite valuable due to the continued demand for horses by the army. When the military forces were not on some expedition, they were kept in training by the Araucanian Indians.

From the foregoing it can be seen that the origin of the Chilean horse seems to have been for the most part from Charcas, Peru. The first important Chilean breeder was the man who later became the first bishop of Santiago, Don Rodrigo González Marmolejo. His ranch at Marga-Marga was called Milipilla. He also had holdings in the valleys of Quillota and Aconcagua.

With the arrival in Chile of a new governor, young Garcia Hurtado de Mendoza, who was a horseman to the core, the continued existence of Chile, and the eventual creation of a Chilean horse, was assured. Mendoza was equally capable of riding either in the old Spanish fashion, *á la brida*, or in the more modern and popular *á la jineta* (Moorish) style. Since horses were his hobby it is not surprising to find that he brought 42 animals of his own, and they were carefully selected, some for war, others for games, some for parades, and, more important of all, others for breeding purposes.

The first civil regulations regarding horse breeding in Chile were made in 1551. This early legislation clearly shows an appreciation for horses and the realization of the need for careful breeding. An official called a *Yegüerizo* was appointed to assist the breeders and to see that the breeding program was effective. Certain of the regulations even indicate that some sort of selective breeding was carried out by the government.

The scarcity of horses in Chile in the early days was not detrimental to their future development. The early soldiers and settlers were forced to ride both mares and stallions despite their desires and traditions. Consequently, since both sexes were used equally by the owners, both had the opportunity of developing in the school of hard knocks, where only the best survived. The incredibly arduous expeditions, the uncharted roads, the virgin and rough mountainous terrain, the turbulent rivers and deep gorges, all combined to make a tremendous demand upon the body and the stamina of the horses in Chile. The selection of individuals which resulted has probably not been duplicated if equaled outside the Western Hemisphere. Frugality, probably after stamina the most valuable trait, became an outstanding characteristic. A contemporary chronicler who helped settle Chile wrote as follows: "We conquered and settled this city of Santiago living four years in continuous warfare with the surrounding Indians. In order to survive we had to keep our swords in one hand and our plows in the other."

After the hazardous first years of the conquest, most of Chile had order and peace, and except for the fringes where war was carried on with the Araucanian Indians, agriculture and livestock raising were firmly established.

The climate, the living conditions, and the geological formation of the numerous valleys in Chile, all acted on horse breeding in a very different way than many other regions of South America. The horse did not have the freedom of the pampas, without the watch and care of man, as in Argentina. Neither did he suffer the difficulties that surround tropical life or life in the altitude of high mountains. The small Chilean valleys allowed horse breeding under the guidance and care of the rancher, whose desire, and need, and love for good horses may not have exceeded other South Americans, but certainly was more easily applied.

The old Chilean *hacendado* was a born horse enthusiast, and his special love was equine sports. He guarded his honor, his horses, his family, and his flocks, and in about the order stated. All his pleasure was had and done on the back of the ever necessary horse.

The improvement of the horses (principally by better selection of stallions, increased pains in training, and improved feed) occupied most of the time between 1610 and 1810. The tranquillity in this colonial era, rarely disturbed by foreign affairs, resulted in a solid and enduring work, upon which the later selection for the breed could be made.

The political and economic impositions of Spain on her overseas colonies tended to eliminate rather effectively any commerce that did not originate in Spain. This was especially true of articles that were large and difficult to transport such as horses. This tended to prohibit the growth of a heterogeneous horse population. The descendants of the Andalusian and Castilian horses became adapted in the new medium and founded the breed which is now called the *Caballo Chileno.* Although he is little designed to obtain great or prolonged speed in racing, his life has strengthened his quarters, lowered his withers, and given him tremendous muscles for his own particular life.

In the nineteenth century the breed was definitely established. There were by that time numerous breeders, especially from the Valley of the Biobío to that of the Copiapó. In the region of Aconcagua, Santiago, and Colchagua the best and the final basis of the traditional geneological families of horses arose and have been retained until today. Surprisingly enough distinctive and homogeneous types seem to have existed even in the nineteenth century. Such were the *Cavalos Cuevanos* established by Donihue of Quilamuta and the *Choapinos* of El Principal de Catemu. All indicate continuous and conscientious selection.

The best breeders of Chilean horses preserved the purity of their race from all crosses even after other types were introduced, beginning about the middle of the nineteenth century. The Thoroughbreds entered first, coming from Australia in 1845, and after them came the coach horses in 1860. In the earliest days protection from outside blood came from Spain's economic control, and in the later days it has been under the control of the geneological record kept by the Sociedad Nacional de Agricultura de Chile, the national agricultural society.

The Sociedad Nacional de Agricultura first stimulated and encouraged the initiative and desire of breeders for the Chilean horse and helped them to establish the studbook. The studbook was opened in 1893 and included the names of the best animals belonging to the oldest breeders established in the country. Registered as number 1 was the stallion, Bronce, owned by Don Diego Vial Guzmán. Bronce was foaled at Aculeo about 1882 and was bred by José Letelier Sierra. He came from an old line of horses that José Letelier Sierra and his brother, Don Wenceslao Letelier, had bred and improved for many years. The Letelier's holdings were at Vichiculén in the province of Aconcagua and at Aculeo in the province of Santiago. All of the ancestors of Bronce are known back at least three generations.

Following Bronce in order in the studbook are the two mares, Vinda and Novicia, who were also the property of Don Diego Vial Guzmán and bred on his ranch, of Cuevano stock. Codicia, the sire of Bronce, is also registered as number 22. Codicia was born at Aculeo in 1876. He too was bred by Don José Letelier Sierra. Bronce sprang from a family that is one of the most popular of all Chilean horse strains.

In the first few pages of the Chilean studbook are a list of the principal families of Chilean horses, the work of Don Francisco A. Encina. The Chilean horse families are found for the most part in certain areas, and each family has several important strains. These families, bred and raised for numerous generations, many times interbred, transmit to their descendants a conformation and certain other characteristics even today. In some families, the Aculeo and the Cuevana for example, one can readily see the characteristics of the Castilian horse while others, such as the Principal and Catemu families, show their Barb and Andalusian descent more than their Castilian. This is no doubt due to the blood of some progenitor who was strong in these characteristics, and doubtless increased by the desire of certain breeders who selected and bred for these qualities.

In spite of the enthusiasm of the breeders and the thousands of animals, there were only 262 animals registered up to and including 1900. This was probably due to the lack of realization of the importance and value of the registry for the Chilean horse. They were then too common. There were no other races at that time with which to compare them in order to judge their worth. There

are also signs that to some extent there was a tendency to encourage registration only by certain breeders. It was undoubtedly because of this that about 1894 another registry of Chilean horses, sponsored by the Asociación de Criadores de Caballos de Tiro, the draft horse association, was formed.

There were also several other factors holding back the development of the Chilean horse in the early years. There was the severe agricultural crisis of 1896 to 1898. There was the sudden wave of popularity for the coach horses. There was the decreasing interest in country life, and last but not least the inclination of the ranchers of that period for a tall leggy horse, possessing but little value as a utility animal on the ranch. All of these things retarded the breeding of the Chilean horses. This lack of interest was noticeable in all parts of the country. The number of horses at the various fairs and shows decreased to the extent that only a single animal, Huiche by name, owned by Don Diego Vial Guzmán, was shown in 1909. This great breeder, with a tenacity and love that was more than admirable, kept on breeding until they once again claimed the recognition they deserved.

In 1910 a group of wealthy ranchers and horse enthusiasts decided to devote themselves to the job of encouraging the breeding of Chilean horses. As before, the Sociedad Nacional de Agricultura was ready and waiting to assist them, and created a special committee and section for the breeders of Chilean horses. This was promptly enlarged to include forty names. The first work of this section was to see that there was only one registry for the Chilean horse and to eliminate and discard the registry maintained by the draft horse association.

The first step was to investigate carefully the pedigrees of all registered horses. All of the animals whose pedigrees were not acceptable were then eliminated. After this all of the remaining animals were personally inspected, and if satisfactory they were recorded in the studbook of the Chilean horse. Also for a number of years this committee was in charge of rigorously inspecting all horses and pedigrees before they were registered in the studbook. Repeated trips were made over a period of several years up and down the country inspecting horses and lending enthusiasm and life to the expositions, fairs, and rodeos. By 1920, one decade later, the number of registered horses had risen to 2,244, and in 1936, to 6,550.

Another activity equally as important as the reorganization and vitalization of the registry was carried on during this same time by the breeders. They sought out the good stallions and mares in widely scattered parts of the country and held exhibitions to indicate their true value. By good fortune there was found at Aculeo the stallion, Angamos I, which has had more influence on the breeding of the modern Chilean horse than any other. Also discovered were some excellent mares of the Principal family, the best descendants of Guante I, and the stallion, Petizo, of the Cardonalina family. Don Tobias Labbé found the great stallion, Gacho, of the Cardonalina family. Other valuable mares of other origins and also other stallions were found.

During the last twenty years there have been continuous crosses between the different families which originated both with the registry and before it. The guiding factor in the crosses has been the effort to breed the horses as close to the "standard of the race" as possible. This standard appeared at the beginning of this article. The Sociedad Nacional de Agricultura also has a statue of a Chilean stallion, considered practically perfect in every way. The statue was modeled by an outstanding Chilean sculptor, Don Frederico Casas Basterrica. The life model was the stallion, Ayahas, No. 1046, although a few small changes were made. The association considers this statue to represent the ideal *Caballo Chileno.*

# THE RURAL ECONOMY OF NORTHEASTERN FRANCE AND THE BAVARIAN PALATINATE, 1815 TO 1830

MILETUS L. FLANINGAM

*Department of History, Economics, and Government, Purdue University*

This study is confined to certain general and basic features of rural life in northeastern France and the adjoining Bavarian Palatinate.[1] In this survey I have deliberately avoided the quotation of lengthy and detailed statistical references, to which the subject so readily lends itself, and upon which it is based. The emphasis is placed, as it seems to me it should be, upon the status of the agricultural laboring classes, the petty bourgeoisie of the rural communities, and upon the extent of technological changes in agriculture of this region.

By northeastern France I have reference to some fifteen departments located in the old historic provinces of Champagne, Franche-Compte, Burgundy, and Alsace-Lorraine. The Bavarian Palatinate had been under French rule after 1792 and was separated from France by the treaties of 1814 and 1815. Many of the principal features of French agriculture in Alsace-Lorraine continue to prevail in the Palatinate.

The data on the Palatinate are derived from the Frederick Theodore Engelmann Papers in the Illinois State Historical Library. The Engelmann family, of Latin peasant, petty bourgeoisie origins, migrated from the Winnweiler-Kaiserslautern area to Saint Clair County (East Saint Louis), Illinois during the years 1831–33. The eldest son, Theodore, and his heirs kept the family papers which include the European phase for the years 1798 to 1833. The collection consists of some two thousand items, mostly letters, diaries, and legal documents and is of great value to students of agricultural and economic history.

The French Revolution and the Napoleonic regime destroyed for all time the institutions of the *ancien régime*. Neither the revolutionary governments nor Napoleon established a permanent and positive system of economic change beneficial to agriculture. What they did accomplish was to open the way for an industrial revolution in French agriculture. However, this revolution did not come about until after 1830. Therefore, the rural economy of the years 1815–1830 constitutes a transitory period from the disappearance of feudalism to the advent of the modern period in French agriculture.

The Bourbon Restoration government cannot be justly credited with many positive and permanent contributions. Indeed, that government and certainly some of its more responsible leaders were unaware of the fundamental character of economic processes. The historian must cite, of course, the protective tariffs and other numerous domestic laws enacted for the benefit of French agriculture. The frequent protestations, on the part of the government, of its genuine concern for the welfare of the agricultural populations must be observed. But all of these must be minimized so far as their contributing in a practical sense to any marked and substantial progress of agricultural economy from that which prevailed under the *ancien régime*. One may seriously question whether the legislative efforts of the government really benefited the large proprietors for whom they were intended.

The relationship between the Bourbon Restoration government and the rural population of northeastern France cannot be examined in detail here. The returning émigrés were convinced that rural France had not changed since 1789. Such a concept was based in part on wishful thinking but mainly upon the superficial appearance of the rural scene in northern France. In brief, such positive economic changes in agriculture, which took place in this period, did so in spite of rather than because of political developments.

A major change in the period under review was in landownership. However, much was left to be desired. Though the feudal system was officially gone, the church still held tenaciously to much of the best land. The forests which, as in ages past, were a principal factor in the rural economy of northeastern France, continued to be held by the state, the municipalities, and a few large proprie-

[1] This article was presented at the meeting of the Agricultural History Society with the American Historical Association at Cleveland, Ohio, on Dec. 27, 1947.

tors in that order of importance. The remainder of the land was held by local proprietors, but their title, in many cases, was never clear until the enactment of the indemnity law late in the reign of Charles X. This act finally settled the land-title question of the former nobility.

The size and character of holdings varied in different parts of the region, but smallness, poor soil, and general poverty of agricultural production were the general rule. Division of the land was against much chance of progress either of a technological or socio-economic character. Among the masses of the rural people the land was divided into countless small patches, and the land was of marginal economic value. Sharecropping in the literal sense was virtually unknown in this section of France. Rents were paid partly in kind as well as in money. Where tenant farming existed the fixed rent was usually paid twice a year, and the leases ran on a 3-, 6-, or 9-year basis. The tenant had to pay for his expenses, including seed, tools, and even the taxes.

In the Palatinate the lease *en detail* (*verpachtung in einzelnen*) was also used. This meant a lease of 6, 9, or even 12 years, but the owner assumed all the taxes and operating expenses. The cash rent of land was generally considered high in the Palatinate during the decade of the 1820s. There was a strong popular desire to own at least some land of whatever value. As Peter Engelmann wrote in a letter to his brother, Frederick, in 1822, "It is so pleasant and reassuring to own some property in land, especially in unsettled times like ours."

A primary factor in retarding progress in agriculture was the financial hinderance both public and private. The lack of capital and inadequate credit institutions had far-reaching consequences. The agricultural population below the proprietor class had virtually no hope of improvement either personally or as a class because of financial conditions. The introduction of scientific advances in agriculture was postponed to later decades for the same reason. In buying land, even waste land and land not under cultivation, the peasant agricultural laborer and the tenant classes were discriminated against by the larger proprietors, by loan agencies, and by the government. The unscrupulous practices of usurers were sufficient to render it virtually impossible for the rural people to acquire anything with a clear title. In Alsace, for example, the great proprietors usually paid 5 percent interest on loans from usurers, but the peasant was required to pay at least 15 percent interest on the same amount for the same period. The Engelmann sons tried to lift the mortgages from the family holding by pooling all their resources. Tariff barriers, the confusion resulting from the multiple currency systems in Germany, and the general absence of money among the lower classes retarded what should have been a natural flow of goods and products throughout this region.

Adequate means of transportation and communication have long been recognized as essential factors in a progressive agricultural economy. Prior to the railroads the lives of those actively engaged in agriculture in northeastern France were doomed to an economy of the *ancien régime*. The inadequacy of the communal roads long remained an obstacle to marked improvement in rural economy. Complaints over the contrast between the system of national roads with the condition of the communal roads were made even in the reign of Louis Philippe.

Recurring agricultural crises in northern France, particularly in Champagne, Auvergne, Oreleanais, Brittany, and Alsace and Lorraine, reached their height in 1816–1817 in the latter two provinces. Drouths, poor harvests, and the incompetance of the government in meeting the situations precipitated extreme hardship. Wholesale migrations took place in 1817 when 4,000 passports were issued to Alsatians alone who migrated to the Rhine cantons of the Palatinate only to increase the difficulties there. In France the price of wheat more than doubled between January 1816 and May 1817. Agricultural laborers were severely affected, of course. In rural areas of eastern France bread cost from 3 to 5 francs per 2 kilograms as compared to 1¼ francs in Paris, Lyon, and Rouen. Speculation in the grain market further jeopardized economic stability and progress in rural France.

Turning briefly to positive changes one finds that France from 1815 to 1830 was just being aroused to the possibilities of scientific advances in agriculture. The real value of these developments was not to come, however, until after the middle of the century. Essential to the introduction of scientific methods was the enclosure movement. In this regard, the rate of increase and the extent of enclosure in northeastern France is particularly notable if compared with that of the time of Arthur Young's travels. Closely associated with the enclosure movement is the decline of the fallow. The

introduction of new cultivation methods, new crops, the extended use of known crops, and better crop rotation are to be observed, but they were largely in an experimental status on a limited scale. Most of this work was done in vegetable crops rather than in grains. The vineyard culture of the Palatinate and eastern France was carried on without appreciable change in methods over those used in the preceding century.

With the year 1820 the voluntary agricultural associations for the advancement of scientific improvements in agriculture appeared. But here again, their real value was not general until later decades.

In regard to livestock, the principal scientific advance worth notice was the improvement in the breeds of sheep. Such developments were also experimental and not generally accepted even at the close of the period. Among the rural populace one finds evidence of strong opposition, distorted concepts, and complete apathy to scientific developments in livestock breeding.

No study in national economics or of a given period is accurate or complete without some measure of the human element. It is in this respect that the persistance of the conditions prevailing under the *ancien régime* are most apparent. Feudalism was gone, but the standard of living of the peasant remained substantially unchanged during the period of the Bourbon Restoration. I have already alluded briefly to the poverty, the bare subsistance economy, and the overwhelming legal and financial obstacles which characterize the period for the agricultural laborer. To this must be added other factors. Housing of the peasants had scarcely changed in either appearance or construction since the Middle Ages. Reconstruction from war in zones of military operations was slow and inadequate. One finds frequent references to entire villages burning down with loss of human life as well as livestock and grain.

A factor which retarded the standard of living of the peasants and also prevented increased production was the primitive character of the tools of agriculture. The industrial revolution in agricultural implements available to the masses employed in the cultivation of the soil was nowhere in evidence. One looks in vain for evidence of the use of any of the improvements in agricultural implements depicted in the contemporary scientific literature of France.

Though the productivity of French agriculture in grains more than doubled in the century after the Revolution this increase came primarily after 1830. The peasants, in the period 1815–1830, simply could not be expected to have increased to any marked degree the productivity of the soil over that of a corresponding period under the *ancien régime*.

With reference to the status of the free peasant and the petty bourgeoisie in the rural economy of the Palatinate, the positive value of the French Revolution and Napoleon in agriculture was even less marked than in eastern France. The changes which took place in German agriculture, even in the most western area, were distinctly evolutionary rather than revolutionary. The German governments were primarily concerned, at least officially, with the emancipation of the peasant. The Bavarian government half-heartedly followed the lead of Prussia in enacting several agrarian reform laws in the period. But their value for the peasant had little real or immediate significance. Much literature both past and present has been produced relative to agrarian reform in Germany under Prussian leadership. But it remains to be proved that the peasant, agriculture as an industry, or the economy of the state experienced any marked improvement before 1830, or for that matter before the middle of the century.

The communal system of agriculture and the domestic system in industry prevailed in the Palatinate. The conditions of rural economy continued to be those of the feudal period though the institutions of feudalism were largely gone. Theodore Engelmann, the eldest son of the family, frequently deplored this fact. He wrote from Saint Louis, Missouri, in 1833 that although he opposed Negro slavery he was obliged to admit that the living conditions of the slaves he had seen were superior to those of the free peasants in the Rhineland.

Vineyard culture, the predominance of the forest, and primitive cultivation of garden-plot holdings characterized the agricultural life of the Palatinate. One of the most interesting developments is the public auctioning of the former feudal forest preserves which were bought by the state or private interests. The transfer of ownership of forest lands was a frequent matter. The father of the Engelmann family rose to the position of head forester at Imsbach near Winnweiler in this period.

The farther one goes into the Palatinate from

the Alsace frontier the greater the decline in the bilingual population and the more distinctly German the rural economy becomes. However, poverty and severe economic hardships haunted the peasanty throughout the region. Fortunately, the frequent local fairs, church holidays, and public festivals were at once a stimulus to agriculture and trade and a primary factor in rural social life. In contrast to France was the tendency toward very large families among the peasantry and petty bourgeoisie. The daughters of the family were responsible for most of the domestic industry in addition to making clothes and attending to the endless household chores. They had one alternative, *i.e.*, to go into the domestic service of the upper classes in the larger towns and cities. Helping close relatives from time to time was the usual practice. The men supplied the source of the agricultural laboring population and recruits for the armies. With considerable difficulty and after a long and harsh apprenticeship one or two in a family might acquire a trade or a profession. In France, after 1820, during years of agricultural depression, the unemployed landless agricultural laboring population constituted a source of industrial labor for the textile mills. In the Palatinate, however, there was no adequate industrial employment available until after 1833 when the Zollverein opened the way for an industrial revolution in Germany.

The women of the family also helped with the field work in season, but in the winter they devoted most of the time to domestic industry. They made the cloth, clothing, blankets and, in fact, all the textile needs of the family. It was not until after 1820 that one finds reference to imported manufactured textile goods among the rural people. These products came from other parts of western Germany and not directly, if at all, from England, France, or even Belgium. There could be no general introduction of scientific agriculture or a revolution in the socio-economic life of the people engaged in agriculture until the Zollverein of 1833 became an established system. Though a state of quasi-feudalism prevailed in the Palatinate the way was open to future progress under the Zollverein.

Dissatisfaction among the rural people with the socio-economic conditions and the course of political events led many to emigrate. The peasant agricultural laborer could not hope to do so, but his petty bourgeoisie neighbor in the rural community sought this method of escape. Among those of the lower classes who considered this possibility was Frederick T. Engelmann. He wrote from Imsbach on November 28, 1831, to his son, Theodore, who had gone to Munich, this revealing letter:

> There is a proposal to you: to leave your fatherland over which aristocracy and clericalism ominously stir their wings again, and to join a large group that will emigrate to America in a year and a half. That would mean that you come home now, learn English and a good handicraft, a tanner, locksmith, or saddler, and surveying, and get good practice in shooting and agriculture. They say that 1500 guilders should suffice to establish you in such a way that, in a few years, you could have all of us join you. What do you think of this proposal?

Later on in the letter the father expressed some doubt in his own mind as to the virtue of fleeing the country in search of a better life in America. He stated:

> And above all other things, is it right to leave one's fatherland because the enemies of light and humanity threaten to overcome it? I am inclined to doubt it. It is true, the boundless poverty that surrounds us everywhere in our German fatherland breaks your heart and it is in stark contrast to the luxuriant abundance the rich blessings that the banks of the Missouri, the Ohio, the Mississippi offer everybody who is but willing to work hard with his hands; but is it honorable to flee from the misery of one's fellow citizens, instead of cooperating with all one's strength to overcome that misery? Think it all over my dear Theodore; and for the time being treat as confidential the information given you.

His son, a spirited young man, had apparently come under the influence of the revolutionary sentiment so popular among the rising generations at that time. He replied to the above letter on January 18, 1832 in part as follows:

> This may surprise you, but I am now a revolutionary through and through, for I am convinced that we cannot expect either welfare and bliss, or quiet and peace, until we, by violence, have chased or destroyed all of the old useless and incapable regime. The princes refuse to give into the demands of the times, and the people awakened to self-determination can no longer remain the means for their [the princes'] selfish purposes. For these principles, now generally embraces, recognition and acceptance as law in the constitutions of the states can only be obtained by a revolt. The people are now enlightened about their relationship to the government and to the sovereign, but the German actually is slug-

gish and good natured enough to *give* where he knows full well that he ought to *receive* only, rather than to clamor and bestir himself.... But the lords will not yield until you point a dagger at their throats. They consider the country theirs as we do the little plot of land we own, and think of the people as their tenants, whose fees they set and whom they chase from the land when they are behind in their payments. I see the feudal system still in force everywhere, but I hope we will soon teach the lords that they are but paid officials. If I had a say in it, we would soon have war and revolution everywhere, and we'd clean up things once and for good. It is readier by far and much better educated for liberal forms of government than France where even the best seed does not thrive nor bear fruit.

The Rhine Provinces furnish the best proof: the small portion of liberalism injected into their constitutions by the French bears the finest fruit, while France herself, although the land of birth of all freedom, has not reaped any blessings from it. How is it possible that there are people in our time, faint hearted and egotistical enough to want to run away to dig for gold in America! Yet we find a large number of our own relatives among them. You have written me but little about it, and I have treated the whole matter confidentially. But now I hear from the Rhenish clod-hoppers that this is an old and well-known story, that not only our young, but also our older generation of cousins think of going along, and that the group is very large in numbers.... I for my part am the sort of person who'd rather live in penury in my fatherland than lie on gold in America. And you—you'd like to stay behind too, I gather.

The Bavarian government settled the matter. Theodore Engelmann was on his way to America, by request, one year after writing this letter. Incidentally, the remainder of the Engelmann Collection consists of letters transmitted between Illinois and the Palatinate until most of the family moved to America. There are also the Civil War letters for Theodore was involved in the western campaigns of that conflict, notably in the battle of Shiloh. A sister, Sophie, married Gustave Koerner, one-time lieutenant governor of Illinois and an American diplomat.

Briefly and in conclusion, it is to be emphasized that northeastern France and the Palatinate were prepared for an industrial revolution in agriculture during the years, 1815–1830. It did not come about until later decades. Though the Revolution and Napoleon had cleared the ground for a new era in the agricultural economy, they failed of themselves to establish it. The Bourbon Restoration government failed to grasp the true character of the economic situation in France created by its predecessors. In the words of Henri Seé, "agriculture in France under the Restoration resembles more the period of the Old Régime than the beginning of the contemporary era."[3] Nowhere in France is this more true than in the departments herein surveyed. It is equally true of the Palatinate.

[3] Henri Seé, *La Vie économique de la France sous la monarchie censitaire, 1815–1848* (Paris, 1927), 24.

## SIR JAMES GRAHAM, AGRICULTURAL REFORMER

ARVEL B. ERICKSON

*Department of History, Western Reserve University*

Most students of the agricultural history of England are familiar with the life and work of such agricultural reformers as Jethro Tull, "Turnip" Townshend, and Thomas Coke of Holkham. Few, however, are acquainted with the life and work of Sir James Graham, owner of the famous Netherby estate in the county of Cumberland. The purpose of this article is to describe the reform activities of Graham and to attempt thereby to rescue his name from an ill-deserved oblivion.

When Graham came into possession of the Netherby estate in 1821, it extended over many thousands of acres of beautifully wooded grounds in the border region between Cumberland and Scotland. Through this estate the waters of the Esk River, famous as a fisherman's delight, flowed down to the silvery sands of the Solway. But while its natural beauty could scarcely be surpassed, the economic condition of the estate, like that of so many others in England, was little short of hopeless.

As a matter of fact, English agriculture had been at low ebb since the Napoleonic Wars. The Corn Law of 1815 had given to agriculture a maximum of protection since the ports of England were hermetically sealed against foreign grain until the exorbitant price of 80s. a quarter for home-grown wheat had not only been reached but

kept at the figure for six weeks. The law, however, did not prevent prices from fluctuating, and agriculture remained in an unsatisfactory condition.[1] Wheat, in 1816, stood at 76s. 2d. per quarter.[2] The next year, due to a crop deficiency at home and abroad,[3] the price rose to the high annual average of 94s.[4] The following years, good crops at home and on the Continent caused prices to fall steadily until by 1821 the average price of wheat was 54s. 5d.[5]

This fall in prices dealt a staggering blow to the agricultural population. The long years of war, plus the law of 1815, had led in many cases to the enclosing of inferior soils upon which a slight profit could be realized only as long as the price of wheat was very high. But, when prices began to fall and eventually reached the 54s. 5d. level, many farmers were completely ruined. On the assumption that the price of wheat would always be at or near 80s., landlords had raised their rents, but they refused to lower them now that prices were below that figure. The tenants, therefore, who got less for their wheat than formerly, still had to pay high rents.[6] The fall in prices hurt the landlords also, many of whom were heavily in debt on wartime mortgages, by making it difficult, and often impossible, to pay the interest as it fell due. As a result many lost part, and frequently all, of their estates.[7]

[1] See W. H. R. Curtler, *A Short History of English Agriculture* (Oxford, 1909), 262–270; and Lord Ernle, *English Farming, Past and Present* (ed. 5, London, 1936), 322–324.

[2] George R. Porter, *The Progress of the Nation* . . . (London, 1836), 1:156.

[3] Thomas Tooke, *A History of Prices and the State of the Circulation From 1793–1857* (London, 1838), 2:16–19.

[4] Porter, *The Progress of the Nation* . . . , 1:156. In June the price of wheat reached 117s. per quarter. See Tooke, *A History of Prices* . . . , 2:18.

[5] Porter, *The Progress of the Nation* . . . , 1:156. Spencer Walpole, *A History of England From the Conclusion of the Great War in 1815* (London, 1890), 2:100, is undoubtedly right in saying that the law of 1815 stimulated overproduction by leading the agriculturists to believe that the law would keep wheat perpetually at or near 80s.

[6] For the attitude of the tenant, see Donald Grove Barnes, *A History of the English Corn Laws From 1660–1846* (London, 1930), 143–145.

[7] William Smart, *Economic Annals of the Nineteenth Century, 1821–1830*, 2:2 (London, 1917).

Conditions in Cumberland were probably worse than they were in any other county of England.[8] As a rule the farms were small,[9] and therefore agricultural improvements were for the most part out of the question. Furthermore, many had been guilty of aggrandizement and were loaded down with thousands of acres of inferior soils. Almost all of the large landlords were heavily mortgaged, their rents were in arrears, and what was far worse, they had become the victims of an overpowering sense of futility and despair. In addition, rainfall was excessively heavy in Cumberland, averaging from 40 to 50 inches per year, and farming was therefore largely unprofitable unless a good drainage system could be installed. But most of the farmers knew nothing about drainage, and the few who did were so deeply in debt that they could not finance its installation in any event.

Netherby was a good example of the depths to which some of the farms and estates had been allowed to degenerate. The good lands, which had become exhausted by over-liming, by repeated corn crops, and by lack of fertilization, were divided into small farms averaging from 40 to 100 acres. About three-fourths of the land was saturated with water, and much of the remainder was moss and uncultivable pasture. Many of the barns and sheds were so dilapidated as to be absolutely useless. The farm houses, with their small, dingy, poorly-ventilated rooms, were not much better. The fences were uneven and in many places had long since actually fallen down, while the roads were nothing but muddy cow trails.[10]

James Graham's father, typical of so many other English landlords, had found business exceedingly irksome and unpleasant and had made no effort to extricate himself from the impending disaster. According to Brown and Yule, two stewards, "The management of the estate had been committed for some time, almost without control, to a Mr. Ellis, in whose hands the tenantry and workpeople deposited their earnings, and by whom a

[8] In 1827, 125,920 of the 670,000 acres in Cumberland were "unprofitable" for cultivation. Porter, *The Progress of the Nation* . . . , 1:173.

[9] See J. H. Clapham, *An Economic History of Modern Britain* (Cambridge, 1926), 1:122.

[10] William Dickinson, "On the Farming of Cumberland," in the Royal Agricultural Society of England, *Journal*, 13:222 (London, 1852). Dickinson's information was from Brown and Yule, the stewards on the Netherby estate.

running account was kept of these deposits as against rent. Sir James drew upon the steward as he wanted money, without regard to half-yearly or annual balances; interest was charged or allowed as the case might be on the various sums that passed through Mr. Ellis's hands; and the result was that while he became virtually master of all around him, neither laird nor tenants could tell, or wished perhaps to inquire, exactly how they stood with regard to each other."[11]

With the passing of each year this state of affairs assumed a more gloomy aspect, the arrears grew larger, and the interest and obligations pressed more heavily. A mere cursory examination of the estate convinced the youthful Graham that a radical change in management was imperative. He was unable, however, to convince his obdurate father that any change in methods was either desirable or possible. His mother, on the other hand, agreed with her son's plans, and together they prevailed upon the "laird of the manor" to turn over its management to his son.

As soon as James Graham began to disentangle the skein of twisted accounts, Ellis, the steward, who did not relish books, records, and accounts any better than the father had, felt unwanted and resigned his position and moved to Liverpool. When James examined the rent-roll that Ellis had kept, he determined to wipe out the accounts completely. This was done, however, with the understanding that there was to be no recurrence of rental delinquencies.[12] Some of the tenants, themselves little removed from farm laborers, had been keeping servants. The most worthy of these servants were granted land as tenants, and to enable them to get a good start money was loaned to them at a very low rate of interest. Others became farm laborers, while some, through James's kindness in giving them the necessary funds, migrated to America.

But the physical plant was equally in need of improvement. Many of the old farm buildings were completely demolished; sheds and fences were torn down and replaced with new ones; useless trees and brush were cut down and burned; roads were built to replace the cow trails; and the farm houses were greatly improved.

By the beginning of the nineteenth century, Galloway cattle had made their appearance along the northern borders of England.[13] This hardy breed of beef cattle was well adapted to the needs of Cumberland, and Graham began to encourage this type as against the Longhorns. Each year he distributed among his tenants, as prizes for excellence in work, three or four bull calves of the Galloway breed from his own carefully selected stock.[14] While other landlords followed Graham's example and thus made Galloway cattle popular in Cumberland, it was not many years before the Shorthorns had come to supplant them, chiefly because the latter type of cattle was able to thrive under diverse conditions of soil and climate and because it matured earlier than the Galloway.[15] In the introduction of this new breed of cattle, Sir James Graham was once again one of the most prominent leaders in England.

At the Netherby estate frequent meetings were held at which the farmers of the surrounding region gathered to discuss cattle breeding, soil culture, drainage, and kindred subjects. Among those usually present, in addition to Graham, were James Curwen of Workington Hall, William Blamire of Thackwood, and S. Rigg of Abbey Holme. The latter was one of the best stockbreeders in Cumberland and together with Graham did much to improve the Galloway breed.[16] From these meetings at Netherby, Workington, Abbey Holme, and Thackwood, Graham increased his own stock of agricultural knowledge, besides gaining further insight into the needs and problems of landlords, tenants, and farmers.

On the death of his father in 1824, Sir James came into outright possession of the estate. Since much of the land was wet, swampy, and therefore unfit for cultivation, he began to interest himself in the problem of drainage. Crude surface drainage, in which stones, turf, and planks were used, had for years been used in the border country, but had long since proved quite unsatisfactory. As early as 1821, therefore, Sir James had employed a shrewd Scottish agriculturist as his steward to aid him in reclaiming large sections of his land. At the same time he employed an experienced tile worker of Staffordshire with whose help he established a

[11] William T. M. Torrens, *The Life and Times of the Right Honourable Sir James R. G. Graham, Bart* . . . (London, 1863), 1:152.

[12] Dickinson, "On the Farming of Cumberland," 221.

[13] Ernle, *English Farming, Past and Present*, 180.

[14] Dickinson, "On the Farming of Cumberland," 252.

[15] Hall W. Keary, "Management of Cattle," in Royal Agricultural Society of England, *Journal*, 9:424-452 (1848).

[16] Dickinson, "On the Farming of Cumberland," 253.

tile-drain manufactory on the Netherby grounds which had a great amount of clay for use in making tile. He then induced his tenants, by making them a free gift of the tile, to install the drains on their farms. Before many years had elapsed there were over 40 miles of tile drains on the lands which Graham owned. Although the experiment was costly, it was entirely successful, and the example was eagerly followed by neighboring landlords.[17] As a matter of fact Graham never ceased to experiment with types of drainage. In 1839, for instance, he wrote a letter to the editor of the *Journal* of the Royal Agricultural Society, an organization of which he was a life-governor, describing a drainage experiment in which he had used the subsoil plow very effectively. In the letter, he declared that one of the reasons why drainage experiments were so frequently unsuccesful was that landlords did not take into consideration local conditions of soil and climate. "It has always appeared to me," he wrote, "that skill in agriculture does not so much consist in the discovery of principles of universal application, as in the adaptation of acknowledged principles to local conditions."[18]

Furthermore, Graham had become convinced that small farms of 40 to 100 acres, the size so characteristic of Cumberland, were uneconomical. Maximum efficiency could be attained only by having larger farming units. Therefore, on the lands he owned (and he enclosed many acres of nearby land in the years from 1821 to 1846), he began to consolidate the small farms so as to achieve a unit of optimum efficiency which he calculated to be 500 acres. On each unit new farm houses, new barns, and sheds were constructed. So efficiently was this planning and reorganizing done that the estate not only began to prosper, but was soon known as "the pride of Cumberland."

But the transformation of the Netherby estate did not absorb all of his time and efforts. A serious business depression had hit the country in 1825, and Graham, like other landlords, began carefully to analyze the situation of the agriculturists. The result of his study of the problems of the landlords, and a very careful analysis of the writings of Adam Smith and David Ricardo, was the publication, in 1828, of a pamphlet called *Corn and Currency*, which he addressed to the landlords of England.

After asserting that the questions of the corn laws and the currency were indissolubly linked together, he went on to deprecate the attempts that had been made since 1815 to raise the home price of grain above the continental level. The obvious result of such a policy was an increase in wages, but as long as the price of food was high an increase in wages was of no particular value to the laborer. In other words, while his nominal wages had increased, his real wages had not. Moreover, high wages were economically undesirable because, declared Graham, wages could be increased only at the expense of profits. Here he was resting his case on the false assumption that wages are paid exclusively out of profits. As Graham's views on wages were certainly Ricardian, so his theory of rent was Millsian, *i.e.*, he declared that the rent which any land would yield was the excess of its produce beyond what would be returned on the same capital if employed on the worst land in cultivation. But these views got Graham into difficulties with his fellow landlords for many of them objected to being told that their best customer was the manufacturer and that the latter's prosperity was dependent upon high profits which the high price of agricultural products reduced by making high wages a necessary *quid pro quo*.

From the subject of wages, profits, and rent, Graham proceeded to a discussion of the much-debated corn laws. The laws of 1815 and 1822 had been unsuccessful, declared Graham, because wheat, instead of remaining at the expected 80s., had been steadily dropping, and in the second place, rents, many of which had been based on the 80s. wheat price expectation, had been steadily falling also. By 1826 Graham had concluded that rents and prices could not be kept up by law even when a monopoly of the home market up to 80s. was given to wheat. Consequently, the corn laws should be reduced to a duty such "as may amply countervail the peculiar taxes to which the produce of the soil is subjected."[19] By "peculiar" taxes bearing on the landlord, he meant the land tax, the poor rate, the county rate, the church rate, etc. But it was impossible to fix a duty at a point where it would just compensate the landlords for these taxes with-

[17] *Ibid.*, 286.

[18] James R. G. Graham, "On the Deanston Frequent Drain System, as Distinguished from and Compared with the Furrow-Draining and Deep-Ploughing of the Midland Counties of England," in Royal Agricultural Society of England, *Journal*, 1:30 (1840).

[19] Sir James R. G. Graham, *Corn and Currency; In an Address to Land Owners* (London, 1828), 10.

out first fixing the price of money. From a study of the Bank of England notes in circulation he was able to show that increases in the issues of the bank had in almost every case led to a rise in prices. The corn laws therefore had not, and could not, protect the landlords against a fall in prices resulting from a deflation of the currency. So unless the price of money was fixed, it was useless to maintain any given duty on corn.

In short, therefore, Graham's advice to the discouraged and heavily-burdened landlords was to consent to a downward revision of the corn laws, retaining only a moderate fixed duty;[20] to insist on a complete revision of all other monopolies such as the Bank of England and the East and West India monopolies; and to demand a great reduction in taxes on land.[21]

*Corn and Currency* became one of the most popular pamphlets of the day and was immediately brought into the picture whenever the subject of the corn laws came up for discussion. Earl Grey, the leader of the Whig Party, could not agree that the protective laws were the cause of the agricultural distress, but he did agree that no corn duty could be properly fixed until the value of money had also been fixed. The laboring classes, while doubtless favorable to Graham's point of view, had no effective means of making their opinion felt. The landlords, for the most part, were furious against him. He was denounced as a traitor, a renegade, and a free trader. And when, in 1846, as a member of the Peel ministry which repealed the corn laws, it became known that he was as ardent in support of repeal as Peel himself, they would have nothing more to do with him. In fact, from that day until his death in 1861, they lost no opportunity to attack him for his "great betrayal" of the landed interests and the conservative party.

When one recognizes the significance of Graham's efforts to secure better soil cultivation, the impetus he gave to the introduction of Galloway and Shorthorn cattle in northern England, his experiments with deep plowing, and his development and popularization of the use and manufacture of tile drains by means of which much wet marshy land in Cumberland was brought into cultivation, his insistence upon the use of larger farm units to achieve greater farming efficiency, and when one recognizes that, more than any other landlord, he was responsible for the repeal of the Corn Laws, one must accord to Graham high rank among England's leading agricultural reformers.

[20] Graham thought 15s. a quarter would be a sufficient duty to compensate the landowners for their "peculiar" burdens. *Ibid.*, 99.

[21] *Ibid.*, 101 and 102.

## NEWS NOTES AND COMMENTS

### DECEMBER 1949 MEETING

The Agricultural History Society met with the American Historical Association and other historical organizations at the Hotel Statler in Boston, Mass., on Dec. 28–30, 1949.

At the session of the Agricultural History Society on the morning of Dec. 30, the following papers were presented and discussed: "Agriculture Among the Shakers," by Russell H. Anderson, Western Reserve Historical Society; "Developments in Agricultural Implements in Ante Bellum North Carolina," by Cornelius O. Cathey, University of North Carolina; and "The Disposal of the Swamp Land Grant in Illinois," by Margaret R. Beattie, Vassar College. Fletcher M. Green of the University of North Carolina and vice president of the A.H.S. presided.

At the luncheon of the A.H.S. on the same day, the speaker, John D. Black of Harvard University, took as his theme, "An Agricultural Economist Looks at Agricultural History." To illustrate his observations on the subject, he gave a resume of his forthcoming book on rural New England since 1920. The society's president, Paul W. Gates of Cornell University, presided.

### DATA ON "COLONIAL" EARTH WORMS WANTED

Darwin, in his last book, showed that earth worms "played a considerable part in the burial and concealment of several Roman and other old buildings in England." There is some evidence to indicate that earth worms may have had another and more important part in human history. In connection with a study of one aspect of that subject, I am in need of information and in particular with reference to the settlement of New York and the New England States. Clues may be furnished by references to earth worms in colonial publications or manuscripts. Any reference to earth worms in the soil, or to absence of earth worms in the soil, or to use of earth worms as bait in fresh water fishing or even in medicines is desired. Also desired is any reference to importation of soil or earth either as ship's ballast or around roots of potted or other living plants, shrubs or trees, or for any other purpose. In absence of reference to soil, any indication of importation of whole plants that would have had soil around roots will be welcome.—*Gordon E. Gates, Department of Biology, Colby College, Waterville, Maine.*

### ACTIVITIES OF MEMBERS

Russell H. Anderson is conducting a seminar based on significant manuscript collections of the Western Reserve Historical Society for interested persons in the Cleveland area.

The study by Lewis E. Atherton of the University of Missouri on *The Southern Country Store, 1800–1860*, has been published by the Louisiana State University Press.

Gladys L. Baker of the U. S. Bureau of Agricultural Economics has completed her analysis of basic changes in Department of Agriculture policies and administration including those in the War Food Administration from the latter part of 1938 to July 1945.

William D. Barns of West Virginia University was visiting professor at Pennsylvania State College during the summer of 1949. He is continuing his research on the history of agricultural organization and agriculture in West Virginia.

Margaret R. Beattie of Vassar College is preparing a study on the development of the landownership patterns in the corn belt of Illinois, 1850–1900.

Harry J. Carman will retire from the deanship of Columbia College in June 1950 and return to teaching.

The book by Andrew H. Clark of Rutgers University on *The Invasion of New Zealand by People, Plants and Animals* has been published by the Rutgers University Press.

An article by Richard O. Cummings on "The Growth of Technical Cooperation with Governments Abroad, 1849–1853" appears in the *Pacific Historical Review*, 18:199–212 (May 1949). In September 1949 Cummings moved from the University of California, Los Angeles, to Brooklyn College.

Paul W. Gates of Cornell University is on leave of absence for the current academic year. He has a Guggenheim Fellowship to write an agricultural history of the United States from 1815 to 1860. He attended the First Congress of Historians of Mexico and the United States at Monterrey, Mexico, on Sept. 4–9, 1949.

Fletcher M. Green of the University of North Carolina delivered the Walter Lynwood Fleming Lectures at Louisiana State University on April 26–28, 1949. His theme was Cultural Progress in the Old South. He lectured at Georgia State College for Women on May 2 and 3 and was visiting professor of history at Columbia University during the 1949 summer session.

The volume by John D. Hicks and Theodore Saloutos on *Agricultural Discontent in the Middle West, 1900 to 1939*, is to be published by the University of Wisconsin Press.

Weymouth T. Jordan, formerly at Alabama Polytechnic Institute, became professor of history at Florida State University in September 1949. He has been designated the social science editor for the university studies series. He presented a paper on the Peruvian Guano Gospel in the Old South before the Florida Academy of Sciences on Dec. 2, 1949. He is continuing his research on Noah B. Cloud and the movement for scientific agriculture in the South prior to 1860.

Guy A. Lee of the National Security Resources Board arranged a panel discussion on "The Historian and the Federal Government: Policies for Administering History Writing and Historical Records Programs" as a session of the American Historical Association at Boston on Dec. 28, 1949.

James C. Malin of the University of Kansas has announced that Volume 1, Geology and Geography, of his *Grassland Historical Studies; Natural Resources Utilization in a Background of Science and Technology*, is to be published privately in March 1950. The price is $2.50 for volume 1.

Wayne D. Rasmussen of the U. S. Bureau of Agricultural Economics has completed his *History of the Wartime Farm Labor Supply Program.*

Hubert G. Schmidt of Rutgers University's Newark center is on an assignment with the American Military Government in Germany.

Paul F. Sharp served as visiting professor of western American history at the University of Minnesota during the 1949 summer session.

Mildred Throne of the State Historical Society of Iowa has an article on "The Grange in Iowa, 1868–1875," in *Iowa Journal of History*, 47:289–324 (October 1949).

J. Allen Tower of Birmingham-Southern College gave a paper on Alabama's Southwestern Pinewoods Region at a session of southeastern division of the Association of American Geographers at Gainesville, Florida, in May 1949.

The study by H. H. Wooten and Margaret R. Purcell of *Farm Land Development: Present and Future*, has been issued as U. S. Department of Agriculture *Circular 825* (1949, 67 p.).

### THE STORY OF TOBACCO IN AMERICA

In his book, *The Story of Tobacco in America* (New York, Alfred A. Knopf, 1949, 296, xxiv p., $5.00), Joseph C. Robert presents a comprehensive and integrated account of "that bewitching vegetable." It begins with Columbus receiving strange dry leaves as tokens of friendship from the natives of San Salvador and ends with a discussion of the opportunity afforded the tobacco export market by the Marshall Plan. The various phases of the tobacco industry, including the plantation, the leaf market, the factory, and nicotine manners, are considered, and likewise the role of tobacco in the economic, social, and political life of the United States. Cogent attention is given to the relation of tobacco to the founding of the Chesapeake colonies, the development of Negro slavery, the coming of the American Revolution, the diplomacy of the early national period, and other significant aspects of our history.

A book of this type is usually a synthesis of the monographs on the subject, but in this instance the author

has done far more. In addition to utilizing the research presented in his earlier work, *The Tobacco Kingdom* (1938), which established him as an authority on tobacco, he has incorporated pioneer research on many aspects of the subject, including the anti-tobacco movement, the popular shifts from one form of tobacco to another, and the anti-trust trial of 1941. A chapter of bibliographical notes provides selective lists of studies on tobacco and indicates topics yet to be explored.

In addition to its broad scope and interpretation, the book is outstanding in other respects. The treatment is lively and fresh, and the story moves at a fast pace. The author's flair for the dramatic has served his purpose well as the use of pertinent anecdotes underline many points that would otherwise appear to have scant significance. The volume is a rare combination; it is entertaining and informative reading for the general public and a useful and reliable tool for professional historians and their students.—*Everett E. Edwards.*

### MINNESOTA AGRICULTURE TO 1885

With the publication of *The Earth Brought Forth: A History of Minnesota Agriculture to 1885* (St. Paul, Minnesota Historical Society, 1949, 314 p., $3.00), Merrill E. Jarchow has added another State agricultural history to a bookshelf which includes histories of agriculture in California, Colorado, Indiana, Iowa, New Jersey, New York, Ohio, and Wisconsin. This new history was originally prepared as a doctoral dissertation at the University of Minnesota, and after some revision it was published as one of the Minnesota Centennial Publications.

The book is organized topically rather than chronologically. The first chapter is devoted to an economic survey of Minnesota's agriculture from 1840 to 1885. It is followed by chapters on geography, land laws, rural society, agricultural machinery, wheat, livestock, dairying, miscellaneous interests, and agricultural societies. Each chapter is carefully documented, and the footnotes are collected in the back of the book to serve both as documentation and as a bibliography. For his source materials, the author has relied upon diaries, agricultural journals, newspapers, census reports, county histories, and archival manuscripts.

Five of these chapters are among the best in the agricultural history literature. They are the two chapters on rural society and the three on farm machinery. The chapter on "The Farmer's Home" describes in unusual detail—and with charm—the log cabins and the sod houses of the Minnesota frontier together with their furniture, lamps, stoves, and cooking utensils. The inhabitants of these shelters faced hazards such as prairie fires, rattlesnakes, cold winters, diseases, and Indians; in addition the women experienced the unceasing toil of the age of homespun. This emphasis upon hardships and discomforts is balanced in the succeeding chapter by a presentation of the amusements and social diversions which a frontier community afforded. The chapters on farm machinery describe not only the development of plows, drills, rakes, reapers, binders, and threshers, but also the evolution of the farm implement industry. The number of implement manufacturers of that earlier day present a contrast to the few big concerns of a later day. Professor Jarchow presents in great detail the early marketing problems of this industry and the manner in which the Minnesota farmers acquired their harvesting machinery.

The other chapters are of lesser merit. Several are too much a collection of notes and contain too little of integration and interpretation. One misses, for example, the integration in the chapter on dairying that one finds in the corresponding chapter in Joseph Schafer's *History of Agriculture in Wisconsin.* One often wishes for less use of newspaper comment and for more attention to agricultural leaders like Hans Peter Jensen, Wendelin Grimm, and William S. King. The chapter on wheat raising, though excellent on marketing problems, gets the cart before the horse and describes marketing before production. An excellent treatment of the agricultural fair is not paralleled by a similar treatment of the Grange. The topical treatment while having its merits has prevented the author from presenting a clear picture of the subsistence farming period and of the transition to commercial farming.

Of all the State agricultural histories, this is the most attractively bound. The reproduction of twenty-six illustrations from contemporary publications is most commendable, but, unfortunately, there is only one map.—*Robert G. Dunbar, Montana State College.*

# CERES AND THE AMERICAN MEN OF LETTERS SINCE 1929

CLAYTON S. ELLSWORTH

*Department of History, College of Wooster, Wooster, Ohio*

During the last quarter of the nineteenth century, when farmers began to leave the farm to live in the city, a full-fledged farm literature was born.[1] The literary sires, like Joseph Kirkland, Edgar W. Howe, and Hamlin Garland, influenced by the social isolation and poverty of many farmers and the realistic style of writing that was then coming into vogue in the United States, certainly begat an ugly creature.[2] Garland, in *Main-Travelled Roads* (1891), produced a farm picture where weary men and women struggle in vain against mortgages and steaming manure piles. Although Garland himself later softened his views, in the main, from 1891 to the depression of 1929, the theme of the harmful effect of the farm upon those who cannot escape from it to the cultural economic wonderland of the city permeated farm fiction.

In the twenties the evils of migrant tenancy were laid bare by Elizabeth M. Roberts in *The Time of Man* (1926). In *Backfurrow* (1925) G. D. Fenton described the frustration of the small farmers in Mid-Michigan when they were unable to buy expensive machinery to compete with richer farmers. These frustrations were overcome, in the manner of the decade, by illicit sexual intercourse and illegal drinking.

The groping thirties saw a continued emphasis upon despair by one group of writers. The numerous Caldwells and Steinbecks presented the pitiful plight of illiterate, uninhibited, hungry sharecroppers and migrant refugees from large-scale mechanized farming and the dust bowls of the Great Plains. The paternalistic hand of the Federal Government had not yet reached down to them.

But by the middle of the forties the parade of how-grim-is-life-down-on-the-farm books had been reduced to a few pickets.[3] Instead, the depression of 1929 emphasized the insecurity of city employment. The vigorous farm policies of the New Deal, the coming of electricity, tractor, car, septic tank, and the prosperity of the World War II years, have combined to produce a counter parade of books militantly proclaiming how-wonderful-is-life on the farm.

Since 1929 the farm has become increasingly something to escape *to* rather than *from*. In literature, at least, the farm serves as a safety valve for the city. Most of the back-to-the-country books which this article discusses are autobiographical. They describe the author's own experiences in leaving the city for the country to engage in full-time, part-time, or, in some instances, no-time farming. Many give practical advice to those who may wish to follow the author's example. A pioneer in this type of book was Ralph Borsodi's, *Flight from the City; The Story of a New Way to Family Security*, first published in 1933, and presented in a revised third edition in 1947. Borsodi told how he and his family, discouraged by the high cost of living, purchased a small farm within commuting distance of New York City and found economic security by producing much of what they ate. At first Borsodi kept his fifty-dollar-a-week job in the city, but quit it when the cash income from the sale of his books increased.

[1] This article was presented at the meeting of the Agricultural History Society with the Mississippi Valley Historical Association at Oklahoma City, Oklahoma, on Apr. 20, 1950.

[2] The history of the farm novel is described in Caroline B. Sherman, "The Development of American Rural Fiction," *Agricultural History*, 12: 67–76 (January 1938), and "Rural Literature Faces Peace," *South Atlantic Quarterly*, 42: 59–71 (January 1943); John T. Flanagan, "The Middle Western Farm Novel," *Minnesota History*, 23: 113–125 (June 1942); and Henry Nash Smith, "The Western Farmer in Imaginative Literature, 1818–1891," *Mississippi Valley Historical Review*, 36: 479–490 (December 1949). The June issues of *Rural Sociology* usually include an annual selected and annotated list of rural fiction by Miss Sherman.

[3] Quite significantly, vestigial pickets like Paul Corey's *Acres of Antaeus* (1946), a story of the mortgage war in Iowa during the depression; and Josiah E. Greene's *Not in Our Stars* (1945), a stark account of the frustrated lives of unhappy men and women on a multi-unit dairy farm in the eastern milk shed, were actually booed by the reviewers.

To satisfy the popular demand for this kind of book, a powerful rival appeared in 1947 in Edward N. and Carolyn Robinson's *The "Have More" Plan for a Little Land, A Lot of Living*. For the man who wishes to engage in specialty farming on a larger scale literary books have also been written. One of these is Russell H. Bennett's *The Compleat Rancher* (1946) to "sell" cattle ranching. Veteran farmers will smile at the optimism and perhaps gullibility of those readers who subscribe to a service offered by an advertiser in the twenty-fifth anniversary issue of the *Saturday Review of Literature* in 1949. The title of the advertisement was: "Farms. How to earn $3000 in your 1st year in the Country."[4]

Other authors prefer to describe their experiences as farmers without offering much detailed practical advice. In 1938 Charles Allen Smart, a Harvard graduate, described in *R.F.D.* his rewarding experience as a livestock farmer in southern Ohio, including his first acquaintance with the AAA, farm cooperatives, and good farm neighbors. Smart's neighbor in northern Ohio, Louis Bromfield, a literary expatriate who returned to his ancestral home in Richland County from France at the outbreak of World War II, has become the most influential of the new-style farm writers. In *Pleasant Valley* (1945), *A Few Brass Tacks* (1946), *Malabar Farm* (1947), and *Out of the Earth* (1950), in his syndicated column, "A Voice from the Country" which appears in the Sunday editions of many papers, and in personal correspondence, Bromfield describes his experiences in transmuting a thousand acres of eroded land into the present prosperous Malabar Farm. He also gives demonstration lectures to an estimated twenty thousand people who visit Malabar annually.[5] The dollars-and-cents wisdom of scientific farming, the intellectual satisfactions of good farming, the high mission that the farmer fulfills as he feeds hungry mouths in the postwar world where people are increasing faster than the food supply, as Malthus once predicted, and the stupidities of farm subsidies are ideas which Bromfield reiterates.

Less well known, but possessing the convincing authentic ring of a dirt farmer is Marion Pedersen Teal's *The Earth Is Ours* (1948). Mrs. Teal tells how she and her husband, repelled by the summer heat of New York City, and the "No Children" signs over the doors of the apartment dwellings, leave a good job and return to a run-down ancestral hog-and-corn farm in Illinois in 1941. The Teals meet with many discouragements, but by sweat, most of it their own, intelligent farm practices, and favorable war prices, the Teals pay off a $12,000 mortgage. And Mrs. Teal, along with her interior decorating, chickens, and two children, has enough energy left to write an excellent book.

Some of the writers come to enjoy life in the country rather than to wrest a living from the soil. Bertha Damon, author of *A Sense of Humus* (1943), describes the joys of vegetable and flower gardening aided by a hired man, Samule, on a rocky farm in New Hampshire. In like manner, Elswyth Thane, Mrs. William Beebe, in *Reluctant Farmer* (1950) describes her managerial difficulties in converting a run-down Vermont farm into a profitable maple sirup and hay venture in seven years and the peace that she finds there as a naturalist in an A-bomb world. Still others, like Lewis Gannett, author of *Cream Hill* (1949), describe the pleasures of week-end countrymen. And with the reading habits of the contented countryman in mind, David B. Greenberg edits two anthologies, *Furrow's End: An Anthology of Great Farm Stories* (1946), and *The Countryman's Companion* (1947), selecting his material upon the avowed principle that farming is "the most rewarding occupation in the world, . . .an adventure rather than a dreary round of labor. . . ."[6]

Not all the writers describe their own experiences. Farm novels are also plentiful. In Paul Corey's *County Seat* (1941), the fictitious Otto Mantz is sent by his mother to the State University of Iowa to escape from hickdom and poverty. After graduation he accepts a position in Chicago where his eyes are opened by the unhappiness and insecurity of the people who live in the slums. Unemployed as a result of the depression, he comes home to the security and happiness of the family farm where aided by the farm program of the Federal Government, he looks forward to successful farming.

A somewhat similar view of the new day which awaits the farmer in partnership with the Federal Government is suggested in the novel of another Iowa writer, Paul Engle's *Always the Land* (1941).

[4] *Saturday Review of Literature*, 32: 173 (Aug. 6, 1949).

[5] Grace Goulder, "Ohio Scenes and Citizens," Cleveland *Plain Dealer Pictorial Magazine*, Mar. 12, 1950.

[6] David B. Greenberg, ed., *Countryman's Companion* (New York, 1947), xvii.

In Engle's book, however, the members of the central family love the land, their purebred horses and dairy cattle, so much that none of them has left the farm. Smart's fictional *Sassafras Hill* (1947) tells the story of a restless artist and veteran of World War II who accepts a job as a hired man on a stock farm, and likes livestock and the kindness of farm people so much that he decides to make a profession of farming.

Some of the recent farm literature goes beyond a rosy description of farm life to acquit farm life of some of the specific faults attributed to it by the derogatory writers of the thirties. In *Hold Autumn in Your Hand* (1942), George Sessions Perry presents *Tobacco Road* in reverse. Sam Tucker, Perry's hero, and a former sharecropper, moves from sandy soil to the black bottom land of the San Pedro River Valley in Texas where he manages by energy and ingenuity rather than book knowledge to feed his family somehow. The Tuckers unlike the Jeeter Lesters are masters of their sex glands. And the grandmother is permitted a box of snuff, a bit of candy, and receives a light switching, instead of death by starvation as in *Tobacco Road*. Albert I. Bezzerides in *There Is a Happy Land* (1942) replies to *The Grapes of Wrath* with the story of Harve Cope, a migrant from the Dust Bowl who manages to earn a living in the San Joaquin Valley. Farm life in the Ozarks of Arkansas finds a defendant in Don West's *Broadside to the Sun* (1946).

Humor, as a third characteristic, brightens much of the farm literature. As early as 1932 Phil Stong dared to suggest in *State Fair* that the farmer and his family occasionally have fun; and four years later, George Milburn's *Catalogue* explained how the mail-order catalog brings a measure of happiness to all but the local chambers of commerce in Oklahoma. With a style that is somewhat like that of Will Rogers, a friend of Rogers, Homer Croy, in *Country Cured* (1943) and *Wonderful Neighbor* (1945), recalls the pleasure that the auction sale, hog ringing, and reading *Wallaces' Farmer* afforded the livestock farmer of Missouri. Mrs. Pedersen actually keeps pigs in the parlor when she becomes the emergency foster mother of six shivering wet little creatures who sleep on her husband's lap during one or two unforgettable nights. Not to be outdistanced, John Gould, in *The Farmer Takes a Wife* (1942), manages to spin a tall yarn in which a bull inadvertently engages in a long-distance telephone call as he licks the receiver of a telephone. The major purpose of the book, however, is to illustrate through Gould's Boston-bred wife that although you cannot take the country out of a boy, you can take the city out of the old girl. Betty MacDonald's best seller, *The Egg and I* (1945), owes its popularity, in part, to the brittle humor with which she describes her exasperating experiences as a wife of a poultry farmer in the northwest. And in accordance with the present vogue, Hartzell Spence's *Happily Ever After* (1949) amuses us with the discomfitures which he and his wife endure as they struggle with unkind soil, countless repairs, and dull craftmen in making a home in Virginia for themselves after V-J day.

Most writers, however, stress the time-honored thesis that the values of farm life are not primarily materialistic or humorous. Gladys Hasty Carroll's *As the Earth Turns* (1933) delineates the priceless values, especially in times of economic crisis and death, of the close ties that bind a large Maine family. And writer after writer affirms how living close to nature makes men humble and aware of God. Robert P. Tristram Coffin expresses this idea poetically in *Strange Holiness* (1935); and it plays an important part in the swift-moving pages of Mary Ellen Chase's *Windswept* (1941). In *Rural Parish: A Year From the Journal of Anna Laura Gebhard* (1947), the author demonstrates how an imaginative and resourceful minister and wife were able to invigorate the spiritual and recreational life of a rural parish in northern Minnesota.

Many writers of pro-farm literature savagely assert the old argument of the evils of an urban industrial civilization. This attack began with the publication in 1930 of the controversial book, *I'll Take My Stand: The South and the Agrarian Tradition*, by twelve Southern writers, mostly literary. These writers, as every one recalls, charged that the industrial way of life had led to a decay of religion, family ties, pride in creative craftsmanship, and to the rise of unemployment, inequalities of income, and the tyrannical superstate. Another approach tinged with a philosophical neo-Thoreauism is made by Henry Beston's *Northern Farm: A Chronicle of Maine* (1948). City life, according to Beston, has alienated man from his enjoyment of the physical sensations of nature, a sense of continuity with the past, and the dignified enjoyment of old age. He along with many other writers is impressed by the parallel growth of the city and wars and the violence of our time.

Bromfield, also, views the monstrous city as begetting such unmanageable brats as the slum, deficit budgets, inadequate transportation, labor unrest, easy target for atomic bombs, jangled nerves, and inadequate water supply.[7] Bromfield much prefers the water that comes from the old oaken bucket to that which is piped in from lakes and streams in which raw sewage is dumped, albeit it is chlorinated.

The virtues of farm life have been affirmed and the values of city life questioned in this series of recent books. What is the significance of this reversal? If the public opinion polls can be accepted as a rough estimate of popular opinion, the predominance of books that extol country life do reflect accurately the thinking of farmers and city people alike. In 1938, the magazine, *Successful Farming*, printed the result of a national sample poll, in which two out of three farmers indicated that they would advise their sons to stay on in farming rather than to prepare themselves for city jobs. In 1945 the same magazine found that the occupation of doctor stood first with farming a close second, although farming was the first choice of the Middle Western farmer and the Negro.[8] (Perhaps the national victory of the doctor over the farmer is explained in part by the fact that both the farmer and doctor are kindred spirits in the elemental task of keeping human beings alive, and the fact that the doctor acquired new prestige during the war on account of his scarcity on the home front.) Meanwhile in 1943, the magazine, *Fortune*, discovered that both the farmer and his wife prefer farming to city life. Being one's own boss, ample food, outdoor living, privacy, and the advantages that children have in the country were given as reasons that influenced this vote.[9] And in 1949 the American Institute of Public Opinion found that 73 percent of the farmers polled think that the man on the farm is happier than the man who lives in the city.[10] And, perhaps influenced by the books that he has been reading, the city man agrees, as 70 percent of those who live in a city of from 100,000 to 500,000 population voted with the farmer. And influenced perhaps by the high farm prices of the forties, a still higher percentage of farmers and city people expressed a belief that the farmer is better off economically than the city man. How much this spate of pro-farm books has led public opinion or on the other hand mirrored public opinion, it is impossible for this historian to say. The farmer has been too busy to read all of them. A popular book like *State Fair*, which became the basis of two motion pictures, the first one with Will Rogers, and the second a musical comedy version of the forties, distributed abroad by Department of State, surely had a considerable outreach. Certainly those distinguished country gentlemen, Washington and Jefferson, would be pleased by the favorable treatment accorded their chosen people by modern American men of letters.

[7] Cleveland *Plain Dealer*, Dec. 25, 1949, Jan. 10, 1950.

[8] *Successful Farming*, 36(7): 13, 22 (July 1938), 43(12): 8 (December 1945).

[9] *Fortune*, 27(3): 8–10, 14, 16 (March 1943). The author is indebted to Carl Taylor, *et al.*, *Rural Life in the United States* (New York, 1949), 500–504, for calling attention to these polls.

[10] American Institute of Public Opinion release, June 24, 1949.

*Comments by Robert G. Dunbar.* Inasmuch as literature generally reflects the economic conditions of an era, it is natural that the good times of the 1940s should result in a glorification of rural life. But apparently to emphasize the new trend, Professor Ellsworth gives the impression that all literature about the farm before 1929 was pessimistic and sordid. Although I do not question that this was the trend, quite a number of favorable descriptions of rural life appeared before 1929. Certainly there is something very positive about the novels of Willa Cather. In them, although farm life is not an easy life, it is a good life.

I recall that in the twenties my aunt was reading with great enjoyment those georgics written by Ray Stannard Baker under the pseudonym of David Grayson. The very titles indicate their "how-wonderful-is life-on-the-farm" point of view. *Adventures in Contentment* was published in 1907, *The Friendly Road* followed in 1913, and *Adventures in Understanding*, with its conclusion that "the City... is no place for a man to live," appeared in 1925. This "how-grim-is-life-down-on-the-farm" period of Professor Ellsworth is also the period of the Country Life Movement with its emphasis upon the goodness of rural life. Out of that movement came Liberty Hyde Bailey's *The Holy Earth* (1915), which was reprinted several times, and other books similarly optimistic.

Not only does Professor Ellsworth paint the picture before 1929 too black, but he does not place the literature of the farm in its literary setting. Most of the prominent men of letters of the twentieth century have been members of the neorealist school of writing. Consequently, they have not only written grim descriptions of country life; they have also written grim descriptions

of city life. Sinclair Lewis' *Main Street*, John Dos Passos' *Manhattan Transfer*, and the *Studs Lonigan* trilogy of James T. Farrell come to mind. And in the literature of the forties, other than the literature of the farm, there are evidences of a shift from destructive realism to a more affirmative, constructive attitude. The more recent novels of Aldous Huxley and Ernest Hemingway are illustrative of this change. These comments suggest that the trends which Professor Ellsworth describes are a phase of wider literary movements.

*Comments by Paul F. Sharp.* With Professor Ellsworth's essay I find myself quite in agreement. His thesis is obviously true for recent treatment of the farmer has been sympathetic and optimistic. The vitality of "agricultural fundamentalism'" in American literature has again been revealed.

This basic feeling for the soil and for those who till it has been reinforced by recent changes in agriculture. The problem facing the novelist of finding happiness for the "cliff dwellers" in modern cities of tension and accelerated living is far more difficult than that of portraying the genuine satisfactions of arcadian simplicities. Moreover, since social status in American communities closely corresponds to economic welfare, the improved economic position of the farmer has removed him from the comic strips as a folksy subject for condescension to an object of envy who has solved the problem of the loaves and fishes within a way of life that promises a measure of happiness.

The portrayal of farm life in literature has also responded to the considerable advances of recent technology which have brought to the farm the comforts and ease of living formerly associated only with the city. The pervasive influences of widespread electrification, bottled gas, deep freezers, and television have indeed robbed the critics of rural life of time-honored arguments. Novelists have been quick to follow these changes as Professor Ellsworth has pointed out.

The role of the how-to-get-rich-quick-on-the-farm book has indeed been an interesting phenomenon. One of the earliest, M. G. Kains' *Five Acres* (1935), had a very wide sale, passing through four printings in less than three years. The clue to this public acclaim may well be found in the publisher's assertion that through this book, "Security is assured and even comfort and luxury may come to the family who owns and wisely operates a small farm."

Books of this type were so successful that within a few years the market was glutted with offerings which promised to reveal the secrets of successful farming in two or three hundred well written pages. To the naive, farming has always seemed an easy achievement, and the promises of these authors seemed real. As one enthusiastic author explained in his preface, "This book aims to be a 'road map' which traces some of the best routes along which you and your family may travel to happy, prosperous and interesting lives." His book sold well for the road-map concept of farming made agriculture merely a matter of following instructions. Then too, the road-map figure of speech was a happy one for highways always promise to the disenchanted and unhappy a release to faraway places of romance and profit. Tired, frustrated, and tense urbanites may be expected to find hope in the titles of many of these guides: *15 Ways to Make Money in the Country*, *We Farm for a Hobby and Make It Pay*, *Successful Part-time Farming*, *A Guide to Country Living*, and *Living on a Little Land*. Even hardened academicians inured to the lure of the things of this world might well be tempted by such promises.

A comment or two about some of the recent novelists mentioned by Professor Ellsworth may also be in order. It is difficult to describe Paul Corey as an enthusiastic and uncritical advocate of rural life. *County Seat* (1941), mentioned by Professor Ellsworth, does not stand alone for it is part of a trilogy dealing with life in a rural community near Indianola, Iowa. The two earlier volumes, *Three Miles Square* (1939) and *The Road Returns* (1940), express in somber and realistic tones the hardships, frustrations, and bitter struggles of the widow Mantz and her family. The emphasis is perhaps that life on an Iowa farm, despite its disappointments and tragedies, is less unhappy than that offered by a depression burdened city.

Louis Bromfield is of course the most widely read and most controversial of the recent enthusiasts. Professional agronomists and entomologists choke with rage when they read his ex-cathedra pronouncements, and farmers wonder where they can get the capital to duplicate his feats without possessing similar literary skills. Those who have expressed themselves admit that many of their colleagues have been guilty of mining the soil and of "whorish agriculture" as Bromfield stigmatizes it. They are convinced, however, that the novelist is equally guilty for he has mined an unsuspecting and gullible urban public. Many of them seem more concerned with the ravages of the corn borer which last year cost Iowa farmers an estimated 177 million dollars than they are whether DDT, a hopeful ally in the relentless struggle against insect infestation, is a dangerous "patent medicine" as Bromfield insists.

# ACHILLE LORIA'S INFLUENCE ON AMERICAN ECONOMIC THOUGHT

## Including His Contributions to the Frontier Hypothesis

LEE BENSON

*Department of History, Cornell University*

In recent years a mantle of obscurity has fallen over the name and reputation of the Italian economist, Achille Loria. Yet, in the last two decades of the nineteenth century, his system of "economic sociology" was of primary importance, and contemporary observers placed him among the foremost academicians of the time. His contributions to the economic interpretation of history and his theories concerning the role of land in the social process profoundly influenced both European and American thought. Thus there is a warrant for attempting to rescue him from an undeserved obscurity.

*Loria's Career, The Origin of His Ideas, and His General Influence.* Loria was born in Mantua, Italy, on March 2, 1857, and his long life, ending on November 6, 1943, was marked by an amazing literary productivity.[1] A bibliography of his publications up to 1932 alone comprised some 884 separate titles; and numerous others appearing thereafter could be listed. Receiving the degree of doctor of laws in 1877 at the University of Bologna, he continued his schooling under two leading contemporary Italian economists, Luigi Cossa at Pavia and Angelo Messedaglia at Rome. After being sent abroad by the Italian government to pursue advanced studies at Berlin with A. H. G. Wagner, C. L. E. Engel, and August Meitzen, he later climaxed his researches in the British Museum. There, in the summer of 1882, indefatigable reading in little-known English books, tracts, and pamphlets of the eighteenth and early nineteenth centuries resulted in a system of thought, based upon land, which was to pervade all his subsequent work.[2]

Upon returning to Italy from Berlin in 1881, Loria taught at the University of Siena, later at Padua, and from 1902 to 1932 he was professor of economics at the University of Turin. In the course of a long career numerous honors were bestowed upon him, among them appointments as Italian correspondent of the Royal Economic Society of London from 1896 to his death, fellow of the Accademia dei Lincei at Rome, 1901, and honorary fellow of the American Economic Association, 1926. He contributed a multitude of articles and reviews to American, English, French, German, and other periodicals, and many of his books were translated into foreign languages. One in particular, *La teoria economica della costituzione politica*, scored a tremendous international success. First published in Italian, 1886, it soon appeared in French, 1893, German, 1895, and English, 1899.[3]

Several of Loria's articles, written for British and American publications during the nineties, give an excellent picture of the intellectual atmosphere in which he matured.[4] Describing the evolution of economics in Italy, he traced the developments which led from the relatively optimistic, laissez-faire views of Francisco Ferrara, the founder of the modern school on the Peninsula, to the rise of

[1] Convenient summaries of Loria's early career with biographical and bibliographical details may be found in Johannes Conrad and others, eds., *Handwörterbuch der Staatswissenschaften* (ed. 3, Jena, 1910), 6: 522–523; J. Espasa and Sons, eds., *Enciclopedia universal ilustrada Europeo-Americana* (Barcelona, n.d.), 31: 258–262. The obituary of Loria by Luigi Einaudi, his close friend and literary executor, in the *Economic Journal* (London), 56: 147–150 (March 1946), gives further data and an excellent summary of Loria's views.

[2] *Ibid.*, 147–150; and "Personal Notes," American Academy of Political and Social Science, *Annals*, 2: 371 (November 1891). Luigi Einaudi has kindly sent me a copy of a letter by Loria's son, dated Apr. 28, 1950, which supplies the information concerning Loria's study at the British Museum.

[3] *Ibid.*, 371; Einaudi, in *Economic Journal*, 56: 150; Conrad, *Handwörterbuch*, 6: 522.

[4] Achille Loria, "Political Economy in Italy," *Economic Journal* 7: 450–459 (September 1897), "Italian School of Economics," in R. H. Inglis Palgrave, ed., *Dictionary of Political Economy*, 2: 460–470 (London, 1896), and "Economics in Italy," American Academy of Political and Social Science, *Annals*, 2: 203–224 (September 1891).

Loria's own school, called "the landed property system of political economy." True to his concepts he showed how the material conditions peculiar to Italy had at every step determined the course of economic theory. Thus, in his view, the conflicts of interest in that country, from the struggles over unification to the eventual dominance of capitalist property relations, were inevitably reflected in political economy.

Loria spelled out this process in detail, beginning with the initial period of Franco-American influence (prior to 1870) symbolized by Ferrara, through the application of English classical doctrines, and the subsequent impact of German scholarship. At all points, he thought, these transformations, conflicts, and advances, occurring in his lifetime, corresponded to the changing structure of the Italian economy. However, with capitalism now sovereign (1891), the necessary conditions had at last been achieved for economic theory to attain a final and permanent definition.[5] This climax was of first importance, he concluded, not only for Italian but world economics.

> Upon the economists of Italy who have already had experience of the scientific impotence of the schools that will not consider the question of landed estate; upon those whose constant object of thought and of study is the constitution of landed proprietorship; upon them it is incumbent to follow in the path so successfully traveled by their great predecessors, and to confront the economic theories beyond the Alps, which are the science of darkness, with an economic theory eminently Italian, which, based on the analysis of landed proprietorship, shall illumine the entire social fabric.[6]

Loria's own thinking shows traces of all the various influences he enumerated as affecting Italian economic thought generally. Although essentially in the classical tradition and strongly marked by the Ricardo-Malthusian doctrines of population and rent, the imprints of other schools are clearly visible. However, as Luigi Cossa pointed out in appraising Loria in 1893, his system stemmed from numerous diverse sources, from all of which he borrowed but with all of which he disagreed. Among others, David Ricardo, Karl Marx, the German historical school, and the evolutionists such as Herbert Spencer are found in Loria, but so too are his serious criticisms of each one in turn.[7] The judgment of Loria delivered in 1897 that Italian economists as a whole "adopt, and temper by an intelligent eclecticism, methods and systems of the greatest disparity" would certainly apply with great force to himself.[8]

In a word, Loria was a "Lorian"; he was *sui generis*, a school by himself, and an attempt to classify him as a devotee of any established school would be doomed to failure. Almost every appraisal made by contemporaries familiar with his work laid stress on this aspect. Thus, Cossa, under whom Loria had studied, cited him as "a man whose mind puts him on a par with any one hitherto named [contemporary Italian economists] and whose original genius places him above all the rest."[9]

*Resume of Loria's System.* If the intellectual influences upon Loria are difficult to separate out without distorting his ideas, the essentials of the system itself are fortunately clear and unmistakable. He subscribed to a rigidly deterministic economic interpretation of history. Its fundamental proposition was that the relationship of man to the amount of "free land" available for cultivation holds the key to human history. A corollary to this axiom was the Hegelian concept of the unfolding of world history in a series of stages, leading at last to a final stage of society. Loria's version of that final society, however, differed radically from that of the German philosopher.[10]

Faced with the necessity of demonstrating the validity of his system, and writing at a time when the deductive-inductive methodological argument was at its height, Loria hit upon the idea of using modern colonial countries to verify his abstract

[5] These views are present, more or less, in all the articles listed in the preceding footnote, but see in particular the *Annals*, 2: 218–224.

[6] *Ibid.*, 224.

[7] Luigi Cossa, *An Introduction to the Study of Political Economy*, tr. by Louis Dyer (London, 1893), 510–511.

Loria's great emphasis upon free land appears to have been essentially derived from acquaintance with the works of Benjamin Franklin, Gibbon Wakefield, Herman Merivale, and Henry George. In addition, the authors of numerous pamphlets, tracts, and travel accounts of the seventeeth, eighteenth, and early nineteenth centuries might well be added to this list of precursors.

[8] Loria, in *Economic Journal*, 7: 451.

[9] Cossa, *Introduction*, 510.

[10] See the summary of Loria's views that follows. The footnotes in his *Analisi della proprietà capitalista* (Turin, 1889), 2: 8-15, make clear his debt to Hegel. For a translation of this important chapter, see the appendix at the end of this article.

conclusions. According to him these modern colonies of European powers recapitulated all the past stages of human experience. In his renowned work, the lengthy *Analisi della proprietà capitalista*, volume 1 demonstrated his system theoretically and deductively, and volume 2, based upon an intensive analysis of American development, proved it historically and inductively.[11]

The ideas embodied in Loria's system, particularly as worked out in the *Analisi* of 1889 and in later works, were but the development of a schematic plan embodying underlying principles which he had formulated a decade earlier.[12] The brief outline which follows is vastly oversimplified and should be read with that caution in mind.[13]

The sad state of affairs that exist today (1889) in the civilized world under the system of capitalism is not the inevitable result of conditions organic to human nature; it is merely the outcome of certain historical tendencies that will disappear at a later stage of social evolution. All economic phenomena, and even in a general way all social evolution, are due to one sole cause, namely agricultural conditions as historically determined by the varying degrees of density of population. The relationship between the productivity of the soil and the density of the population is the ultimate factor in determining the various historical periods of the economy of nations.

[11] *Ibid.*, 2: 1–7.

[12] The letter from Loria's son to Luigi Einaudi referred to in footnote 2 states that the system was worked out in embryonic form in 1876. Fitting together the information in Einaudi's 1946 article, and that contained in the 1950 letter, it is apparent that the summer of 1882 is the probable date when Loria specifically hit upon "free land" as the fundamental key to a much more elaborate version of his system. By 1885, he formally employed it in his *Profitto del capitale* which won for him the Royal Prize of the Academia dei Lincei.

[13] This outline has been pieced together from numerous sources. See, in particular, Ugo Rabbeno, "Loria's Landed System of Social Economy," *Political Science Quarterly*, 7: 258–293 (June 1892), especially 258, 269, 276–282; and Achille Loria, *The Economic Foundations of Society*, tr. by Lindley M. Keasbey (London, 1899), 1–9. Keasbey's translation was made from the second French edition, 1893, which in turn was a revision of the original Italian edition of 1886. See also the chapter in the appendix below.

In this outline an attempt has been made wherever possible to keep the flavor of the original. For a proper understanding of Loria and his influence, the reader should examine Rabbeno's article in full.

As long as free lands exist that can be cultivated by labor alone, and where a man without capital may, if he chooses, establish himself upon an unoccupied area, capitalistic property is out of the question. No laborer is disposed to work for a capitalist when he can labor on his own account upon *land that costs him nothing*. Evidently, therefore, while such conditions prevail, the laborers will simply take possession of the free lands and apply their labor to the soil, adding to this the capital they accumulate. Neither interest nor profit can exist, and only a relatively simple economy can prevail under these conditions. Access to free lands must be cut off in some way before capital can produce profits. If, because of the sparsity of population, the soil itself cannot be entirely appropriated, access to the free lands can only be prevented by subjugating the laborers themselves. Thus slavery is introduced, but later on, when the declining productivity of the soil has to be offset by labor with a higher degree of efficiency, a milder serfdom supplants the more brutal slavery. Eventually, the increasing population and the diminishing fertility of the soil ends the era of free lands cultivatable by labor alone. Then the era of capitalist production relations begins, and man, though legally free, actually loses his freedom.

Colonial countries, where free lands abound, offer striking illustrations of these propositions, and anyone who has rightly comprehended the development of these interesting lands must recognize the truth of the above assertion. The evolution of colonial economies and institutions under our very eyes enables us to grasp the entire course of human development. The history of the United States, from its first beginnings as an English colony to the present time (1889), furnishes an excellent illustration of this principle.

In the beginning of the English colonies in America, a most fertile free soil existed which could be cultivated without capital, hence no wage class could exist, and the population was dispersed. The existence of fertile uncultivated lands rendered improvements unnecessary, and the isolation of the producers rendered them impossible. Although as a result of these conditions the population was lethargic, a general feeling of comfort prevailed. This state of affairs could not last owing to the increasing population and the diminishing fertility of the soil. Since wages were incompatible with free land a system of compulsory association was necessary to secure increased ef-

ficiency. Slavery was introduced, but though it is more efficient than isolated cultivation, after a while the increased efficiency is overbalanced by the continuing exhaustion of the soil. Indentured servants were then introduced because as long as free land existed it was impossible for a capitalist to get free men to work for wages. During all this period the reward of free labor was very high because the only other form of production apart from forced labor was the small industry, where the entrepreneur was at the same time a workman. Thus the beginning of the nineteenth century in the United States marked a golden age of the laborer. In time the increase in population again demanded a more efficient form of production, property tended to become concentrated, large farming superseded small farming, and the demands of an increasing population acted as incentives to industrial inventions.

In the United States during the nineteenth century a movement took place similar to the enclosure movements of Europe during the sixteenth and seventeenth centuries. It was caused by the same phenomenon, the cessation of free land cultivatable by simple labor. Today (1889), small landed properties are more characteristic of those States where population is scanty and industries are little developed. However, in the regions where population is relatively dense and industry flourishes, the ownership of the soil shows a threatening and ever-growing concentration, a situation accelerated by injudicious grants of government land.

Once this stage is reached, all the economic and social evils of Europe are reproduced. Although at a slower rate, these conditions are now also developing in America (1889). It is noteworthy that in America this economic transformation goes hand in hand with a political transformation. The cessation of economic freedom, because of the total occupation of the soil, is destroying democratic methods, the glory of early American times. The Congress of great democrats, which once characterized the era of independent producers, is being superseded today by a Congress of plutocrats and railway magnates, which is the parliamentary expression of an era in which capital predominates.

Interestingly enough, these fundamental ideas, roughly outlined by Loria in his work on agricultural rent, completed in 1879 with the title, *La rendita fondiaria e la sua elisione naturale*, coincided in time almost exactly with Henry George's *Progress and Poverty*, which also focused attention upon the role of land in society. However, not only has it been established that Loria did not know of George's work in 1879, but it is a fact that there are fundamental differences in the Italian economist's treatment of land.[14] As noted above, Loria was generously eclectic, and it is possible, with but a little difficulty, to ascertain the numerous sources upon which he drew. His fundamental conceptions are to be found in earlier writers, and he made constant use of the works of these predecessors, with detailed comment and explanation. E. Benjamin Andrews paid tribute to his "astonishing mastery of economic literature, whether standard or recondite, old or recent. In [this] . . . respect . . . [he] is second to Roscher alone." Andrews also commented on the fruits of his long study in the British Museum,[15] as did Luigi Einaudi in his obituary of Loria published in the *Economic Journal:* "I never met a man who could quote from memory so many forgotten English books, tracts and pamphlets of the eighteenth and of the first half of the nineteenth centuries."[16]

Loria's own contribution was to combine and fuse the ideas, suggestions, philosophies, and methods of extremely diverse thinkers into an elaborate, minutely worked-out, historical system in which the evolution of human societies was traced upon strikingly novel lines. It is not that he originated the ideas of economic determinism, free land, and stages in human history, nor that he alone promulgated them at the time, but his application and fusion of these concepts resulted in a system peculiarly his own. This point, almost universally acknowledged by contemporary re-

[14] Rabbeno, in *Political Science Quarterly*, 7: 259 n. 1, 262, 266, also n. 3. The date of publication of Loria's *La rendita fondiara e la sua elisione naturale* is frequently given as 1880, but the preface is dated Oct. 29, 1879. The earlier year is used in Conrad's *Handwörterbuch*. It is quite possible that Loria saw George's book by 1882, the year when he first became aware of the importance of free land.

[15] Review by E. Benjamin Andrews of Loria's *Analisi* in the *Political Science Quarterly*, 5: 717 (December 1890). In a most flattering review of another work by Loria in the *Economic Journal*, 4: 82 (March 1894), James Bonar placed Loria *above* all others as "thoroughly conversant with the literature of his subject in almost every European language."

[16] Einaudi, in *Economic Journal*, 56: 148.

viewers, needs to be emphasized because of its importance in assessing Loria's impact upon subsequent economic thought. Otherwise, the inadequacies of the brief sketch given above may mislead modern readers familiar with the fact that numerous writers dealt with much of the same material in the last quarter of the nineteenth century.[17]

*Introduction of Loria to American Scholars.* In the decade of the eighties, following his volume on agricultural rent, Loria published three more works which rounded out his description of the economic basis of political, social, literary, and religious ideas and institutions. This series of books culminated in the massive *Analisi della proprietà capitalista* (1889), a work which won for its author widespread acclaim. In Italy the zenith of his influence was accordingly in the nineties, and Luigi Einaudi is authority for the statement that no young student of economics in that decade neglected to read the *Analisi*.[18] By 1896 Loria could list as partial or thoroughgoing adherents of the "landed property system of political economy" at least twelve well-known Italian academicians.[19]

Nor was Loria's influence limited to the Peninsula. Despite the grave handicap that none of his major works was translated out of the original Italian until 1893, his theories received widespread attention on the Continent in the eighties.[20] When *La teoria economica della costituzione politica* (1886) was revised and translated into French in 1893, it reached a much larger audience and created even more of a stir than had the original.[21]

The man probably most responsible for bringing Loria to the attention of American scholars was Edwin R. A. Seligman of Columbia University. As early as 1886, he pointed to the increasingly important role played by Italians in economic theory, and his interest in them continued thereafter.[22] An excellent linguist, Seligman frequently reviewed Italian books for the *Political Science Quarterly*, of which he was an editor. As a result of a flattering review in 1889 of one of his books, an Italian, Ugo Rabbeno, wrote to Seligman in January 1890, expressing a desire to correspond regularly.[23] Seizing this opportunity to get an authoritative article on recent developments in Italian economics for his *Quarterly*, Seligman obtained a promise from Rabbeno to do such a review.[24] Originally it had been scheduled for publication in 1890, but Rabbeno's personal affairs intervened and it was not actually printed until September 1891.[25] During the course of their correspondence,

[17] Despite the fact that many others dealt with these subjects, Loria's role in promulgating such concepts received wide recognition. Some notion of this may be gained by the fact that Edwin R. A. Seligman, in his famous series of articles on "The Economic Interpretation of History," found it necessary to chastise the "many critics in England, France and Italy... [who] have hailed Loria as the originator of the doctrine of economic interpretation. Even Professor Keasbey [American translator of Loria's work] is not entirely free from this error." *Political Science Quarterly*, 17: 297 n. 1 (June 1902). At an earlier date, 1893, Seligman came close to, if he did not actually commit, the same error himself; see *ibid.*, 8: 751–755 (December 1893), particularly 752. The degree of originality attained by Loria in all phases of his work was also attested to by men of the stature of Luigi Einaudi, Luigi Cossa, Ugo Rabbeno, James Bonar, E. Benjamin Andrews, Frank W. Taussig, and Henry R. S. Seager; others might be named. For specific citations of their views, see footnotes 1, 7, 13, 15, 38, and 52 of this article.

[18] Einaudi, in *Economic Journal*, 56: 148.

[19] Loria, in Palgrave, *Dictionary*, 2: 469.

[20] In the 1893 revised edition of his 1886 work, Loria wryly pointed out that his theory had at least the merit of calling forth numerous objections from eminent critics. See "In Answer to Some Objections," in his *Economic Foundations*, 355–379.

[21] See the reviews of this work by Edwin R. A. Seligman in the *Political Science Quarterly*, 8: 751–755 (December 1893); and by James Bonar in the *Economic Journal*, 4: 76–82 (March 1894).

Although I hesitate to appear guilty of exaggerating Loria's influence unduly, I wish to call attention to the close parallel between the ideas in Loria's book and Charles A. Beard's economic interpretation of history as expounded, for example, in his *The Economic Bases of Politics* (New York, 1922). Compare part 3, "The Economic Foundations of Politics," in Loria's *Economic Foundations* (1899), with Beard's work. Of particular interest is Loria's chapter on "Property and Politics" and Beard's chapter on "The Doctrines of the Philosophers."

[22] Seligman's review of *Giornale degli economisti*, in the *Political Science Quarterly*, 1: 704 (December 1886). Support is lent to this supposition by a letter from Henry R. S. Seager to Richard T. Ely in 1893, quoted in footnote 52 below, as well as other material presented in this article.

[23] Rabbeno to Seligman, Jan. 16, 1890, in the Seligman Papers at Columbia University. All Seligman correspondence cited hereafter is in this collection.

[24] Rabbeno to Seligman, Feb. 22, 1890.

[25] Ugo Rabbeno, "The Present Condition of Political Economy in Italy," *Political Science Quarterly*, 6: 439–473 (September 1891). Seligman translated the article from the Italian.

Rabbeno indicated his great enthusiasm for Loria,[26] and particularly his *Analisi*, but Seligman expressed reservations concerning aspects of the Lorian system. As a result of this interchange Rabbeno wrote a long critique, printed in the June 1892 *Quarterly* under the title, "Loria's Landed System of Social Economy."

This critique was not the first to present Loria's work favorably to the American audience. Possibly as a result of the Rabbeno-Seligman correspondence, E. Benjamin Andrews had already reviewed the *Analisi* in the *Political Science Quarterly* for December 1890. No author could hope for a better notice.

> Italy has long been giving us much of our best economic literature, and this is her masterpiece. Already well known... Loria now presents his *magnum opus*.... The broad scope of the *Analysis* affords space and occasion for review of every cardinal topic in political economy,—population, value, money, interest, taxation,—and upon none of them does Loria fail to show himself a master.[27]

Pointing out that "Loria's main thesis is that profits arise solely from the suppression of free land," Andrews proceeded to summarize the first volume, but gave little notice to the second except to comment that it was "a most valuable addition to economic history." This flattering review appears to be the earliest analysis of Loria's ideas in an American scholarly journal.

The next year Loria's views on the history of the United States were presented even more forcefully to American scholars. Not only did Rabbeno's piece appear in the *Political Science Quarterly* with a statement that his colleague's work was important enough to warrant a forthcoming separate article, but in the same month, September 1891, the *Annals* of the American Academy of Political and Social Science carried Loria's own description of "Economics in Italy," including a brief discussion of his system.[28] Immediately thereafter the October issue of the *Quarterly Journal of Economics* appeared with a short article by Loria on "The Landed Theory of Profit."[29] This contribution had been elicited in response to the highly polemical discussion raging in that periodical on the then "burning question" of profit and capital, in the course of which James Bonar had called attention to Loria's work upon those topics.

In capsule form Loria presented his views on American history, seeking to justify the position that social classes were not the product of human nature but the result of historic factors.

> ... it is especially to researches in the economic development of the United States that I owe this conviction. In fact, the study of this marvelous development has shown me that, so long as there is free land which can be cultivated without capital, profit is impossible.... Profit, then, is only the corollary of the lack of free land, which takes away from the laborer all option and establishes economic servitude.
>
> All Americans who know the history of their enchanting land will readily recognize that it gives a striking illustration of these views.[30]

And Loria went on to show how the landed theory of profit explained the democratic features of the United States, the existence of slavery and the behavior of the planter aristocracy, and to indicate that American protectionism, the indirect system of taxation, and many other developments could easily be explained by his doctrines.[31] Thus, in the space of two months, the three leading American scholarly periodicals had all brought the Italian economist to the attention of their readers.

Despite this effective publicity, it was probably in 1892 that the details of Loria's system became really well known in the United States for the first time. The April number of the *Quarterly Journal of Economics* carried a short article paying tribute to Loria's free land theory, but terming its postulates exaggerated,[32] and in June, Rabbeno's second paper—a 36-page exposition and analysis—appeared.[33] When the intense interest in the land question at this time, and the importance of the *Political Science Quarterly* as a scholarly medium, are kept in mind, the generalization is warranted that few careful, up-to-date students were unaware of Loria's views thereafter.

The next year was to see Loria's stock boosted even higher, for it was marked by the appearance of the French edition of the 1886 work dealing with the explicit relationships between economic and social history. Entitled *Les Bases économique de la constitution sociale*, it was hailed by Edwin

[26] Rabbeno to Seligman, May 3, 5, 1891.

[27] Andrews, in *Political Science Quarterly*, 5: 717.

[28] Loria, in *Annals*, 2: 203–224.

[29] *Quarterly Journal of Economics*, 6: 108–111 (October 1891).

[30] *Ibid.*, 108–109.

[31] *Ibid.*, 110.

[32] C. A. Conigliani, "Professor Loria's Theory of Profit," *ibid.*, 6: 344–346 (April 1892).

[33] "Loria's Landed System of Social Economy," *Political Science Quarterly*, 7: 258–293 (June 1892).

R. A. Seligman in the *Political Science Quarterly* with these striking sentences:

> This is a most remarkable book. In the original Italian edition it made a considerable stir. In its present form it is destined to make far more of a stir; for it is bold and original, and deals with the most fundamental of all questions—that of human progress.
>
> Professor Loria really makes two points: first, that the growth of law, politics and morals is based primarily on economic relations; second, that the evolution of economic relations is the simple working out of one cause—the suppression of free land.[34]

Seligman's review was, however, by no means an unmixed panegyric. Emphasis upon the economic basis of social relations and the erudition displayed in working out the details of this process won lavish praise, but Loria's concept of the role played by free land in the discussion was dismissed as immature and unproven. However, Seligman concluded by noting that an English translation was underway, and "If any work of the last decade deserves this distinction it is surely that of the talented and erudite Paduan professor."[35]

Actually it was not until 1899 that Lindley M. Keasbey was finally able to publish his translation entitled *The Economic Foundations of Society*. Fortunately, some letters of the Seligman-Keasbey correspondence relative to the translation have been preserved, and they help to reveal the importance attached to Loria's work by leading economists. Thus, despite Seligman's reservation on free land, he maintained the book was so important that "we *must* get this English version out," and his feelings on the matter were essentially shared by Simon N. Patten and Jeremiah Jenks.[36] It is important to note, however, that even Keasbey, who extravagantly admired Loria's work, found it impossible completely to accept his views on land and expressed some criticism in the preface to the translation.[37]

Similarly, in 1895, Frank W. Taussig, reviewing one book by Loria, and another by his disciple, Rabbeno, put forth a mixture of grave doubts with high praise:

> To the present writer [Taussig] the theory of pristine equality and of free land, which is the foundation of this new philosophy, seems untrue to history and weak in logic; the application of that theory to the explanation of all economic and social development, seems forced and artificial. . . . It is inevitable, therefore, that he [Taussig] should dissent. . . . But such dissent is not inconsistent with a high respect for the learning and the ability of the author, or a cordial appreciation of the brilliant talents which he has again shown. . . .[38]

And referring to Rabbeno's application of free land to American tariff history, Taussig wrote:

> The boldness and brilliancy of Professor Loria's work, and the suggestiveness and ingenuity of his generalizations, not unnaturally tempt to emulation. But it may be doubted whether the keys to the understanding of the industrial development of the United States have been found by either the leader or the disciple.[39]

One further quotation from a review by E. Benjamin Andrews in 1899 might fairly well summarize the general American reaction to Loria at the end of the decade:

> The great value of Loria's contribution to economic science is his demonstration of the vital part played in human history by men's relation to the land. This, his central thesis, may be said to have been pretty successfully made out, and his work upon it entitles him to a permanent and high place among economic thinkers. But that men's relation to the land takes effect in the precise ways figured out by Loria is far less clear, despite the mass of apparent evidence with which he seeks to substantiate his analyses.[40]

*Loria's Influence on Richard T. Ely.* At least one

[34] Seligman, in *ibid.*, 8: 751–752.

[35] *Ibid.*, 755.

[36] Keasbey to Seligman, Nov. 10, 1895.

[37] Loria, *Economic Foundations*, ix. T. N. Carver, reviewing this edition in the *Political Science Quarterly*, 15: 143–147 (March 1900), acutely observed (p. 145) that Loria's views, despite wide reading, were derived mainly from observations based on his native environment where landed property operated in somewhat the manner described by the Italian economist. Edward A. Ross, in his "Recent Tendencies in Sociology," *Quarterly Journal of Economics*, 16: 552–553 (August 1902), also pointed out that Loria's exaggerated notion of universal laws stemmed from Italian experience.

[38] Taussig's review of Loria's *Problemi sociali contemporanei*, in the *Political Science Quarterly*, 10: 538 (September 1895).

[39] Taussig's extended review of Ugo Rabbeno's *American Commercial Policy*, in the *Quarterly Journal of Economics*, 10: 108 (October 1895). This work by Rabbeno is an excellent example of the application of Loria's system to a phase of American economic development. As such it helps make up for the handicap of not having Loria's *Analisi* in English, and it is worth the attention of those readers whose curiosity has been aroused by the necessarily oversimplified sketch of the Italian's system.

[40] E. Benjamin Andrews' review of Achille Loria's *La costituzione economica odierna*, in the *Political Science Quarterly*, 14: 719–720 (December 1899).

outstanding American economist was greatly influenced by Loria's free land theory. A comparison between Richard T. Ely's *An Introduction to Political Economy* of 1889 and his 1893 *Outlines of Economics* unmistakably reveals the power of Loria's fine Italian hand. The contrast between the two works is definite and sharp, and as Ely himself pointed out in the preface, although his original intention had been merely to revise the *Introduction* (1889), the result was virtually a new book.[41] Fortunately Ely's papers have been preserved, and by using them it is possible to reconstruct some of the events that lay behind this development.

As a result of a disagreement with President Daniel Coit Gilman over his future status, Ely left Johns Hopkins University in 1892 to assume the directorship of the newly created School of Economics, Political Science, and History at the University of Wisconsin.[42] Among the graduate students in his first seminar that fall was H. H. Powers, a former professor of French at Oberlin College who had resigned from that position because of a growing interest in economics and sociology.[43] Powers' grasp of these subjects must have impressed Ely because he was asked to assist the latter in revising the 1889 *Introduction*. According to Ely he had only anticipated help which could be passed over perfunctorily in the preface, but the total aid received was so great that it became necessary to make particular acknowledgement of it and to declare the product a joint effort.[44]

It is possible that one element of Powers' aid lay in giving Ely a better picture of Loria's system than he could have obtained by merely reading the article in the *Political Science Quarterly*. Just prior to joining Ely's seminar in the late summer of 1892, Powers, already a gifted linguist, had spent several weeks in Italy traveling with Emory R. Johnson. Loria's system was then creating something of a sensation, and possibly they heard it referred to during their stay there.[45] However that may be, the minutes of Ely's seminar reveal that at the October 12, 1892 meeting, a student named Samuel Edwin Sparling gave a review of the article on Loria in the *Political Science Quarterly* for June 1892.[46] Hence it is clear that Ely and all his graduate students present that day became acquainted with the theories of the Italian economist, at least as early as October.

It was probably due to Powers' linguistic abilities that Loria's theories came to play so large a role in the 1893 edition of Ely's *Outlines of Economics*. The letters from Powers to Ely show that he actually wrote the greater part of the revised edition, although this writing was done under the general supervision of Ely. The same letters also indicate that the book was written in the early months of 1893, following the seminar discussion of the *Political Science Quarterly* article.[47] Indisputable evidence exists that Powers could read Italian at the time, and Loria's untranslated work on agricultural rent, *La rendita fondiara e la sua elisione naturale* (1879), is listed in the bibliography of the college edition.[48]

[41] Richard T. Ely, *Outlines of Economics* (college ed., New York, 1893), v–vi.

[42] Richard T. Ely, *Ground Under Our Feet: An Autobiography* (New York, 1938), 175–176. A valuable discussion of this development and the role played by Turner in bringing Ely to Wisconsin is found in Merle Curti and Vernon Carstensen, *The University of Wisconsin, A History* (Madison, 1949), 1: 630–639.

[43] Powers to Ely, May 1, 1893, in the Ely Papers at the Wisconsin State Historical Society. All Ely correspondence hereafter cited is in this collection.

[44] Ely, *Outlines*, v–vi.

[45] Emory R. Johnson to Ely, Sept. 4, 1892. Johnson did not mention Loria in the letter, but American graduate students abroad in those years almost invariably attempted to become familiar with the views of leading economists in each country visited.

Support is added to the above speculation by the following facts. Upon returning to America in 1892, Johnson was made coeditor of the book department of the *Annals*. David Kinley and H. H. Powers of the University of Wisconsin were listed as cooperating in the work. *Annals*, 3:vi. The next year, with Johnson becoming sole editor, the list of cooperators was expanded to include, among others, Achille Loria. *Annals*, 4:vi. Johnson received his M. Litt. from the University of Wisconsin in 1891 and had been at Johns Hopkins University in 1890–91. He was greatly impressed with Powers' ability, and in a letter to Ely on Sept. 4, 1892, he recommended that Powers be given a fellowship in economics.

[46] Economic Seminary Minutes, 1892–1893, p. 7, in the Ely Papers.

[47] Powers to Ely, Feb. 3, 4, 6, 16, Apr. 5, June 14, 1893, Jan. 3, Oct. 4, 30, 1894.

[48] Sometime after graduation from the University of Wisconsin in 1882, Powers studied French and Romance philology for 26 months in Paris. Powers to Ely, May 1, 1893. That Powers could read Italian is evident from his review of a book in that language for the *Annals*, 3: 658 (March 1893).

It is interesting that the University of Wisconsin, so far as can be learned today from a study of the university library records, has never possessed a copy of

Unfortunately no footnotes were employed in the *Outlines*, but the transformation from the 1889 edition would alone appear to be convincing testimony as to the impact of Loria's doctrines. The vast differences in the treatment of the two key subjects of wages and rent are particularly pertinent because these topics are standard, fairly precise, and are defined at some length. In the 1889 version, Ely gave the classical definitions of Ricardian rent, and "the iron law of wages," using those exact words in referring to the latter.[49] The 1893 book introduced a most important change in the wages question. There is no longer any mention of the iron law of wages operating in the United States. On the contrary, the view is given that the American workingman had been more fortunate than his English cousin:

> Through our industrial history to the present he has been able, by going a reasonable distance, to find cheap or free land where he could earn an independent living. Under such circumstances it has been impossible for the pressure of competition to work out its natural results in manufacturing industries. It is *free land* [*Italics added*] rather than a protective tariff which has kept up the wages of labor, and if that resource, which has thus far tempered the asperities of the struggle, once disappears we may look for different results unless new safeguards take its place.[50]

The analysis of rent shows equally significant modifications. In fact, in the later book, a chapter is entitled "Rent With and Without Free Land," and there is utterly no suggestion of this factor in the 1889 *Introduction*.[51] Hence, despite the lack of direct citation, there seems to be little doubt that Loria's doctrines were of considerable importance in the writing of a textbook which did so much to shape the course of economic thought in the United States. This conclusion is reinforced by the knowledge that in later life Ely often quoted from Loria's works and corresponded on occasion with him.[52]

*Frederick Jackson Turner's Debt to Loria.* An even more striking transformation in the same period is apparent in the work of Ely's young Wisconsin colleague, Frederick Jackson Turner, then a professor of history at Madison. In this respect, the publication in 1938 of Turner's early essays is of the greatest value in tracing the indirect role played by Loria in the formulation of the frontier thesis.[53] Although Turner acknowledged the influence of the latter's work in his famous essay of 1893, the brevity of the citation there given has to date effectively prevented discovery and recognition of the great debt owed by him to the Italian economist. Yet, reading the early Turner essays in sequence, against the background of Loria's prominence in the early nineties, and recognizing the penetration of the free land doctrine into the work of Ely—Turner's then colleague, friend, and former teacher—the existence of the debt would appear to be unmistakable. Fortunately, in addition to a brief quotation from Loria by Turner, an abundance of internal evidence exists to clarify the relationship.

As early as 1889, the young Wisconsinite, Turner, in a review of Theodore Roosevelt's *The*

Loria's *La rendita fondiara*. This suggests that Powers or Ely probably owned a copy personally.

[49] Richard T. Ely, *An Introduction to Political Economy* (New York, 1889), 215–216, 221–225.

[50] Ely, *Outlines*, 56. See also 54–59, 180–185. In this book Ely's treatment of stages in history is somewhat different than in the 1889 edition and appears to have been influenced by Loria. Compare Ely's *Introduction* (1889), 42–54, with his *Outlines* (1893), 14–24.

[51] Compare Ely, *Introduction*, 215–216, with his *Outlines*, 168–178.

[52] James Washington Bell of the economics department at Northwestern University is authority for the statement that Ely frequently quoted from Loria. Letter from Jens Nyholm, Northwestern University librarian, to the author, Apr. 25, 1950. Mario Einaudi of Cornell University, who knew Loria as a colleague and close friend of his father, Luigi Einaudi, informed me of the Ely-Loria correspondence. I am also indebted to Einaudi for much helpful information concerning Loria and his system. Another indication of Ely's familiarity with Loria may be inferred from a letter to him by Henry R. S. Seager, dated Rome, May 11, 1893. Seager maintained that in spite of the boom Seligman and others were trying to give to Italian economic literature it was only a feeble reflection of English and German work. However, "Loria stands alone and seems really worthy of careful study. He has an original and consistent system." In Ely's *Ground Under Our Feet*, 191, there is an intriguing statement which might also indicate Loria's influence. On Wisconsin's pioneer role in developing land economics, Ely wrote: "... I am confident that very soon after I came to Wisconsin in 1892 we began a systematic treatment of what is now called Land Economics. I treated the whole subject under the awkward title, 'Landed Property and the Rent of Land.'" This wording smacks a good deal of Loria's and Rabbeno's phraseology, particularly the latter's article, which Ely read in 1892.

[53] *The Early Writings of Frederick Jackson Turner*, with a list of all his works compiled by Everett E. Edwards and an introduction by Fulmer Mood (Madison, 1938).

*Winning of the West*, had definitely indicated his awareness of the importance of westward expansion in American history.[54] Nevertheless, despite such awareness, and despite the fact that, as James C. Malin has put it, ideas concerning the importance of free land were clearly "in the air,"[55] the crux of the matter is that as late as the fall of 1891 Turner had far from crystallized his thinking on what later came to be known as the frontier thesis. In October and November of that year he published an essay titled "The Significance of History."[56] Although the germs of some later formulations can be traced to it, and to earlier work, this essay makes clear that Turner was quite uncertain and unassured in his grasp of the historical development of the United States. Though American history was often alluded to, there was no discussion of the stages of growth, its importance as a laboratory for social science, the landed basis of American democracy, etc. On the contrary, Turner was somewhat dissatisfied and pessimistic concerning the ability of scholars to understand American history. In context if not otherwise, the following quotation tends to support this judgment:

> The story of the peopling of America has not yet been written. *We do not understand ourselves* [*Italics added*].[57]

However, when we turn to the very next essay in the volume, first published on November 4, 1892, and probably written in late October,[58] a completely different situation obtains. The tone of "Problems in American History" is definitely unlike its predecessor's. In the 1892 work, the thirty-one-year-old Turner is now boldly assured, self-confident, unequivocal. The essay is filled with sweeping and unqualified generalizations, and some previous judgments are completely reversed. For example, he was now highly scornful of Hermann Eduard von Holst's study of the Constitution, whereas, in 1891, he had flatteringly referred to von Holst, along with James Bryce, as having "shown us a mirror of our political life in the light of the political life of other peoples."[59]

Nothing resembling the following declaration had appeared in the earlier essay:

> In a sense, American history up to our own day has been colonial history, the colonization of the Great West. This ever retreating frontier of free land is the key to American development.[60]

Fulmer Mood's comment upon these sentences is of the greatest significance:

> In this reference to free land, Turner for *the first time in print* [*Italics added*] put his finger upon the material cause, the fundamental economic factor, that he was to stress in his interpretation of our history.[61]

What had wrought the great transformation? How had Turner discovered that the "ever retreating frontier of free land is the key to American development"? Sufficient evidence now exists definitely to rule out the possibility that the famous census bulletin was responsible. For one thing, Turner in the essay itself clearly revealed that he could not possibly have seen the bulletin, announcing the end of the frontier, in time for it to have affected his thinking.

> Study the maps in *Scribner's Statistical Atlas* in which the settled area is colored for the various census periods, and you will perceive that the dark portion flows forward like water on an uneven surface; here and there are tongues of settlement pushed out in advance, and corresponding projections of wilderness wedged into the advancing mass. The map for the next census will show

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[54] *Dial*, 10: 71–73 (August 1889). In numerous articles, Fulmer Mood has presented an excellent analysis of Turner's early writings, and the frontier concept generally, which are indispensable for a proper evaluation of Turner. I have greatly benefited from perusing them and from Mood's generosity in making available to me unpublished research notes of the highest value.

[55] James C. Malin, "Space and History," *Agricultural History*, 18: 67–68 (April 1944).

[56] *Early Writings*, 43–68.

[57] *Ibid.*, 64. See also Rudolph Freund, "Turner's Theory of Social Evolution," *Agricultural History*, 19: 78–87 (April 1945). This article first called my attention to the pessimistic note in Turner, as well as to the idea stated below that he did not see the census bulletin before 1892.

[58] *Early Writings*, 71–83. I am indebted to Fulmer Mood for the information suggesting that the essay was composed in late October. Turner's opening words refer to a recent conversation with a leading State senator. A special session of the Wisconsin legislature was called for Oct. 17, 1892, and this session probably brought about the meeting. Several other facts tend to reinforce this conclusion—chief among them being Turner's characteristic habit of putting off writing until the very last, and the tremendous amount of time consumed earlier in the year arranging for Ely's coming to Wisconsin and the creation of the new school

[59] *Early Writings*, compare 61 with 71–72.

[60] *Ibid.*, 72.

[61] *Ibid.*, 37–38.

gaps filled in, and *the process repeated on a new frontier line* [*Italics added*].[62]

Moreover, the publication by Wendell H. Stephenson in 1945 of some correspondence between Turner and Woodrow Wilson demonstrates the validity of the interpretation.[63] Turner sent Wilson a copy of his "Problems in American History," published on November 4, 1892. The latter followed the doctrine of this essay closely in an extremely critical review of Goldwin Smith's work on American politics which he published in the *Forum* for December 1893.[64] In this review Wilson specifically stated that the frontier still existed. Thus, Turner clearly could not have made any marginal comment, if he had learned subsequent to completing his article that the frontier was gone.

If not the census bulletin, what then was responsible for the transformation in Turner's essays? Could it have been the result of his learning about Loria's work? Even if no other evidence existed than the material presented in the preceding pages, the presumption would be quite strong that this was the case, unless a most astounding coincidence had occurred. Fortunately, it is unnecessary to depend upon such circumstantial logic to sustain the point. Turner himself specifically pointed out that the "Problems" essay was the foundation for the more famous "Frontier" paper of 1893,[65] and this celebrated essay contains a most important quotation from Loria which is not only a fundamental part of the paper, but furnishes the basis for the entire section on the frontier as a field for "comparative study of social development."

In addition, a plethora of internal evidence exists in *both* essays which clearly establishes the close relationship between the Italian economist's free land system and Turner's own views. Taken in conjunction with still other data, there appears to be little reason to question the assertion that Loria was, if not *the* most important, at least *a* most important influence upon the Turner hypothesis.[66]

As noted above, positive written evidence exists that Loria's system was being seriously discussed on the Wisconsin campus by Richard T. Ely. In view of the extremely close relation between the two professors (Turner having been very influential in bringing Ely to Wisconsin) and the equally close relations between the history and economics departments generally,[67] it seems unlikely that Turner would fail to share some of Ely's interest in Loria. In addition, it is more than likely that Turner read the *Political Science Quarterly*, since at that time it was the sole scholarly periodical which regularly carried articles and reviews on American history, and that therefore he read or soon heard of the article by Rabbeno upon publication.[68]

These speculations aside, the opening paragraphs of "Problems in American History" reveal, to this writer at least, unmistakable evidence of Loria's views. Turner began the essay by repeating almost word for word some observations made by him in the 1889 review of Roosevelt's *The Winning of the West* concerning the importance of territorial expansion and the failure of Eastern historians to recognize this factor.[69] But something new was then added. Von Holst, praised the year before, was now held up to censure because in his treatment of slavery he had failed to take "note of the evolution of political and constitutional institutions resulting from this [territorial] expansion."[70] This new note corresponds closely to Loria's emphasis that political and governmental institutions in the United States, during the period of slavery and indentured servitude, differed from those of all other countries with similar economic forms, precisely because of the vast territorial extent of the country.[71] In his *Quarterly Journal of Eco-*

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[62] *Ibid.*, 75.

[63] Wendell H. Stephenson, "The Influence of Woodrow Wilson on Frederick Jackson Turner," *Agricultural History*, 19: 253 (October 1945).

[64] Woodrow Wilson, "Mr. Goldwin Smith's 'Views' on Our Political History," *Forum*, 16: 494–495 (December 1893).

[65] *Early Writings*, 185 n. 1.

[66] An interesting aspect of this relationship is revealed by the fact that in later life Turner spoke of Loria as an important figure in social science. Merle Curti of the University of Wisconsin has been kind enough to give me this information.

[67] Ely, *Ground Under Our Feet*, 179–180; and Curti and Carstensen, *Wisconsin*, 1: 630–641.

[68] This statement is based upon a fairly diligent survey of the contents of these journals published from 1886 through 1893.

[69] *Early Writings*, 71; and *Dial*, 10: 71–73 (August 1889).

[70] *Early Writings*, 71–72.

[71] Loria, *Economic Foundations*, 141–142. Of course Turner could not have seen this edition because it was published in 1899. However, Loria's *Analisi* of 1889, from which Turner quoted, was the volume in which

*nomics* article of October 1891, Loria had pointed out that Americans employing his system would easily be able to understand "the historical necessity of slavery [in the United States] as the only means of obtaining a profit in the epoch of free land. . . ."[72] Further, the *Analisi* of 1889 contains a long, detailed analysis of the economic, political, and institutional results of slavery at different times in American history, depending upon the amount and quality of free land available.[73]

Immediately after the criticism of von Holst in Turner's 1892 essay came the famous statement that the "ever retreating frontier of free land is the key to American development."[74] It was precisely this very feature of American development which Loria had already emphasized in pointing to the United States as a recapitulation of man's social and economic development. Turner was clearly aware of Loria's concept, and was impressed by it, because in the "Frontier" essay he quoted the Italian's dictum that the United States held "the key to the historical enigma."[75]

In his 1892 essay Turner called for a study of the vital forces that lay behind American institutions. The leading role played by the frontier was used by him to highlight the suggestion that the American commonwealth be studied as a developing organism.

> The institutional framework of the nation may be likened to the anatomy of the body politic; its physiology is the social and economic life molding this framework to new uses.[76]

Compare these statements with Loria's formulations:

> The colonies really are . . . a political animal from which social physiology is able to garner treasures; they are for economic science what the mountains are for geology, since if the latter make the primitive stratifications of the earth accessible to modern science, the colonies enable us to read, in the book of the present, pages torn from social history.[77]

There is little doubt that Turner's biological phraseology came from Loria because in the "Frontier" essay he also used both the "mountain" illustration and the "page in history" illustration. It might be well at this point to reproduce Turner's discussion of Loria exactly as he gave it in 1893.

> Loria, the Italian economist, has urged the study of colonial life as an aid in understanding the stages of European development, affirming that colonial settlement is for economic science what the mountain is for geology, bringing to light primitive stratifications. "America," he says, "has the key to the historical enigma which Europe has sought for centuries in vain, and the land which has no history reveals luminously the course of universal history." He is right. The United States lies like a huge page in the history of society. Line by line as we read from west to east we find the record of social evolution. It begins with the Indian and the hunter. . . .[78]

The citation that Turner himself appended after the name "Loria" in the first line read simply: "Loria, *Analisi della Proprieta Capitalista*, ii, p. 15." No place or date of publication was given. This citation was not amplified in any edition of the "Frontier" essay with which Turner was directly concerned.

This passage, thus cited, has many interesting aspects. Chief among them for our immediate purpose is the question as to how Turner was able to abstract these sentences from a massive, complicated, two-volume, economic treatise in a language then quite unfamiliar to him.[79]

In view of the close relationships existing among members of the School of Economics, Political Science, and History at the University of Wisconsin, it is highly probable that Turner, as well as Ely, profited from H. H. Powers' translation of Loria's work. Direct evidence on this point is not available, but it is certain at least that Powers,

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the Italian economist gave his views on American evolution in great detail. The entire book elaborated upon the theme of free land's consequences and used America as the prime example.

[72] Loria, in *Quarterly Journal of Economics*, 6: 110.

[73] Loria, *Analisi*, 2: 55–119, *passim*. No impression is intended that I read Italian. I have been fortunate in securing a summary of these chapters from George Banfi of the Italian department at Cornell University.

[74] *Early Writings*, 72.

[75] *Ibid.*, 198.

[76] *Ibid.*, 73.

[77] Loria, *Analisi*, 2: 8. For a translation of the entire section, see the appendix of this article.

[78] *Early Writings*, 198.

[79] I am indebted to Fulmer Mood for the important information concerning Turner's unfamiliarity with Italian in 1892 and 1893. Two letters by Turner to his mother from Italy, dated Nov. 18, 1900 and Jan. 1, 1901, describe his Italian lessons and indicate that he was quite innocent of any prior knowledge of the language.

who minored in history at Wisconsin, knew Turner more than casually. In a letter to Ely, dated January 3, 1894, Powers, then teaching at Smith College, wrote that the offer to have him return to Madison was tempting and he would again like "to work with Ely, [William A.] Scott, and Turner."[80] Furthermore, Ely's preface, dated June 1893, makes it clear that Turner was asked to read and criticize the early chapters of the 1893 *Outlines, before publication*,[81] and we know that those chapters were written by Powers.[82] Still another fact tends to indicate the close-knit nature of the Turner-Ely-Powers relationship. The University of Wisconsin has never possessed a copy of Loria's *Analisi*, from which Turner quoted, but Ely did, and his copy, purchased by the John Crerar Library in 1902 along with other books, now reposes in Chicago.[83]

The passage in Loria given above, and the sentence immediately preceding it in the "Frontier" essay, also demonstrate that the Italian theorist was the direct source of two of Turner's most important ideas, *i.e.*, American evolution recapitulates all the stages of man's social and economic development, and the corollary that this recapitulation offers an invaluable scientific laboratory for the study of the past.[84] The importance placed upon these ideas by Turner can be readily grasped by the space and emphasis given to them in the 1893 version and in a subsequent revision made by him in 1899:

> The history of the United States finds its chief claim to attention in its value as a field for the scientific study of social development. The speed of settled society into these continental wastes, and the free development of a democracy in relation to unoccupied lands, constitute the peculiar features of our national life.[85]

Turner's brief citation of Loria, quoted above, needs amplification if the Italian's influence on him is to be properly understood. In actuality, the paraphrased figures of speech, *i.e.*, the "mountain," "political animal," and "page in history" figures, occur on page 8 of volume 2 of the *Analisi*, and only the sentence directly quoted by Turner is on page 15. But this span, pages 8–15, includes Loria's entire chapter titled "The Historical Revelation of the Colonies"! A reading of this chapter (translated and printed as the appendix to the present article) would seem to leave little question that Turner was greatly dependent upon the *Analisi* while writing both the "Problems" essay of 1892 and the "Frontier" essay of 1893.

In addition to the similarities in ideas and in phrasing pointed out above, numerous other instances of dependence might be cited. Thus, compare Loria's rebirth of mankind in America, and the brilliant illumination to be gained by crossing the continent from the New York factories to the Dakota fields (from east to west, note), with Turner's perennial rebirth of American life and his description of the process of evolution from *west to east*;[86] compare Loria's improvement upon Edward Gans (who had placed himself Janus-like upon the Capitoline hill of Rome to observe the transit of civilization) by taking the colonies as a vantage

[80] Powers to Ely, Jan. 3, 1894.

[81] The Chautauqua Literary and Scientific Circle edition of Ely's *Outlines*, v. The college edition was issued later in the year and contained additional material.

[82] A letter from Powers to Ely, Apr. 5, 1893, informed Ely that the first nine chapters were finished.

[83] Louis Kaplan of the University of Wisconsin Library is authority for the first statement, and a letter from the librarian of the John Crerar Library, Herman Henkle, informed me of the second.

[84] Loria's concept is remarkably similar to the recapitulation theory of the biologists, *i.e.*, the human embryo recapitulates the evolutionary process of the race. The formulation of the concept in these words is borrowed from James C. Malin.

I must here express my admiration for the keen insight exercised by Malin in 1946 while speculating about Loria's influence upon Turner—the first time anyone had emphasized in print the significance of Turner's quotation from the Italian economist. Having nothing more to go on than this quotation, he was yet able to reconstruct the actual theory underlying Loria's system and to recognize List and Herder as forerunners of Loria. Loria cited these two, among others, as sources. See his *Analisi*, 2: 8 n. 2. Malin has also pointed out the great importance attached to these ideas by Turner. See James C. Malin, *Essays on Historiography* (Lawrence, 1946), 14–17.

Fulmer Mood's contribution to the discussion of this aspect should also be noted. In 1939 he pointed to List as a forerunner of Turner in employing the "stages of history" concept. See his "The Development of Frederick Jackson Turner as a Historical Thinker," Colonial Society of Massachusetts, *Transactions*, 34: 305–307 (Boston, 1943). An excellent discussion of List's system is found in Rabbeno, *American Commercial Policy*, 325–354.

[85] *Early Writings*, 279.

[86] *Analisi*, 2: 10, 15; and *Early Writings*, 187, 198. The material cited from Loria is found in the appendix.

point, with Turner's stationing his observer at Cumberland Gap to "watch the procession of civilization";[87] Loria's transporting men from Elizabethan England to the virginal environment of America and the resultant social and economic metamorphosis, with Turner's confronting a European with the wilderness and the resultant social and economic metamorphosis;[88] and, finally, though by no means all, Loria's use of Ercalano and Pompeii, those "palimpsests of Nature," with Turner's use of the same rare term of "palimpsest" in dealing with the Eastern States as a page in history.[89]

Viewed in this light, a letter from Loria to Turner, dated at Padua on August 18, 1894, appears to take on considerable significance.[90] In it Loria expressed his cordial thanks to Turner for having sent him a copy of Orin Grant Libby's monograph, published in June 1894.[91] Indeed, Loria was a logical man to receive a copy because the data compiled by Libby may be said to have confirmed some of the Italian's deep-seated convictions.

A most important aspect of Loria's work was his description of "the economic foundations of politics." In treating this topic he described the political results stemming from the conflict between agriculture and industry (broadly defined) under certain conditions which were present in the early days of the American Republic. According to him the economic conflict thus engendered provoked a corresponding political conflict. This explained how "the ruling class may come to be divided into an agrarian and an industrial party in countries where the population is sparse and where land rent does not exist."[92]

Although European parties were also established upon economic bases, a host of other considerations prevented purely economic ends being sought there. These considerations, however, were happily unknown to America and therefore

> . . . the divergent revenue interests [rent and profit] can . . . be perfectly well safeguarded by purely economic laws. Consequently, not only the platforms, but also the ends and aims of the American political parties are essentially economic in character. It is a perfectly well-known fact that the Republican party of the United States, which upholds federalism and protection, is composed of the commercial and manufacturing classes; and that the free-trade and States-rights Democratic party recruits its ranks from the class of landed proprietors. The struggle between these two parties is thus essentially economic, since it corresponds exactly to the most important division of their revenues. The economic character of American political parties is, indeed, so marked that we see them change whenever social conditions or the interests of their members are altered in any way.[93]

Several pages later we find this interesting statement:

> Whenever rents prevail in one part of a State and profits in another, the conflict that breaks out between the two assumes the character of a territorial struggle, and sectional politics thus arise as the corollary and natural product of the underlying economic sectionalism.[94]

Turner had still another reason for sending Libby's monograph to Loria for approval and comment. His own introduction to Libby's work made it clear that he was calling for a series of studies devoted to the investigation of economic sectionalism in the United States along the lines indicated by Loria, although the latter was not mentioned by name.[95]

[87] *Analisi*, 2: 15; and *Early Writings*, 199.

[88] *Analisi*, 2: 9–10; and *Early Writings*, 188.

[89] *Analisi*, 2: 8, with *Early Writings*, 285. An excellent illustration of other parallels that might be cited are Turner's use in the 1892 essay of the "law of rent" (*Early Writings*, 82). As Malin pointed out in his *Essays*, 19, that idea was dragged into the essay by the heels, and apparently Turner never used it again. However, taken in conjunction with Loria's emphasis on the law of rent, its appearance in 1892 becomes quite understandable. It would also appear to be a reasonable conclusion that if a full translation of Loria were available parallels equally striking would be found in other places, in addition to the *Analisi*, 2: 8–15.

[90] A typewritten copy of this letter, probably made by Turner, is in the Ely Papers.

[91] Orin Grant Libby, *The Geographical Distribution of the Vote of the Thirteen States on the Federal Constitution, 1787–8* (Bulletin of the University of Wisconsin, Economics, Political Science, and History Series, vol. 1, no. 1. Madison, Wis., 1894).

[92] Loria, *Economic Foundations*, 154.

[93] *Ibid.*, 155.

[94] *Ibid.*, 167. See also the examples of sectional politics given on p. 168. None of them concern America, but this would make even more logical Turner's sending the monograph to Loria as an American illustration of his ideas.

[95] Compare Turner's introduction in Libby, *The Geographical Distribution of the Vote*, 1–6, with part 3, "The Economic Foundations of Politics," in Loria's *Economic Foundations*, 117–354, *passim*. Note that this work was

The continuity of the relationship between Turner and Loria is clearly revealed by an incident involving Turner and Selig Perlman. In the fall of 1909 Perlman took a course with Turner at Wisconsin. Upon learning that he read Italian, Turner asked him to translate a post card from Loria in that language. This note expressed sincere admiration and extravagant praise for an unnamed work by Turner which Loria had received from him.[96]

The essential point in citing these strong parallels between Loria and Turner is not at all to deal with the question of the latter's originality. If that question is deemed to be important in its own right it is irrelevant here. Unquestionably there were many other influences operating upon Turner, and it would be an error of ridiculous proportions to attribute the frontier thesis solely to Loria.[97] Nevertheless, it does appear to be a reasonable conclusion that all of Turner's prior reading and studying, and the tendencies evident in his very early work, were crystallized, illuminated, and "fixed" by acquaintance with the Italian "landed property system of political economy."

If this conclusion is justified it may be of some aid in eliminating a major obstacle to a satisfactory resolution of the present professional uncertainty concerning the validity of Turner's teachings, *i.e.*, the widespread difference of opinion over what the frontier thesis contained, and what it should be interpreted to mean. No simple question of semantics is here involved, as is obvious after reading the literature on the subject. George W. Pierson's account of the results of a questionnaire designed to get a clear expression of historical thinking about Turner is an excellent illustration of the difficulty inherent in the controversy.[98]

The Turner frontier hypothesis, as formulated in his essays of 1892 and 1893, contains at least six specific propositions whose meaning is now given a new degree of certainty:

1. The thesis *was* based on an elaborate and detailed system designed to analyze scientifically the structure of all human society.
2. American history was *literally* a record of historical evolution.
3. "Free land" literally meant *free land*, without price, unoccupied, accessible to all, and capable of cultivation by simple manual labor.
4. Free land *was* the fundamental motivating factor in society.
5. The passing of the frontier *literally* meant that the safety valve was closed.
6. The closing of the safety valve meant that a new epoch in history was dawning.

Without laboring the obvious it should be emphasized that these interpretations are restricted to Turner's original statement, because the later development and application of his ideas must be studied as a problem separate from the present one of inception. Loria's system of economics provides not only the philosophical and methodological background for Turner's formulation of his ideas on the significance of the frontier in American history, but Loria's system supplied the essential theoretical content of these six propositions. He who would understand Turner must first master Loria.

## APPENDIX: LORIA'S CHAPTER ON "THE HISTORICAL REVELATION OF THE COLONIES"[99]

Anyone accustomed to viewing the history of mankind with a teleological prejudice would judge the unfolding of the early stages of the development of colonies under the very eyes of old Europe to be the result of a great and wise predestination. Such a person would maintain that Divine Providence had invented a way to compensate European civilization for those wide gaps in its economic history, which have been neglected by historians of all times, for it could be said that Providence has always called into being a new world, which, developing in full sight of the old one, reveals to the latter its own past. Just as Ercalano and Pompeii, those "palimpsests of Nature," have petrified

available in a French edition in 1893; the Italian original was published in 1886; and the *Analisi* of 1889 was written in this spirit.

[96] Conversation of Fulmer Mood with Selig Perlman, Madison, Wis., June 2, 1950.

[97] For example, Fulmer Mood has convincingly shown the influence of William F. Allen and Francis A. Walker upon Turner. See his "Development of Frederick Jackson Turner as a Historical Thinker," Colonial Society of Massachusetts, *Transactions*, 34: 295–303 (Boston, 1943), and "The Concept of the Frontier, 1871–1898," *Agricultural History*, 19: 24–30 (January 1945).

[98] George W. Pierson, "American Historians and the Frontier Hypothesis in 1941," *Wisconsin Magazine of History*, 26: 36–60, 170–185 (September, December 1942).

[99] Chapter 2 of Loria, *Analisi*, 2: 8–15. George Banfi of the Italian department at Cornell University has kindly translated the chapter and read other pertinent portions of the volume.

an instant of the ancient era, preserving for us a dead period still full of life, in the same way the early stages of colonial development recreate in the vivacious colors of youth, an era which for us is long since past. The colonies really are, as [Sir William] Petty would say, a political animal from which social physiology is able to garner treasures; they are for economic science what the mountains are for geology, since if the latter make the primitive stratifications of the earth accessible to modern science, the colonies enable us to read in the book of the present, pages torn from social history. Moreover, if it is true, as Hegel put it, that universal history could not have revealed itself as a system if it had not been for the Mediterranean, that meeting place of antiquity, then it is also true that social history could not be fully explained if the colonies did not reveal, in their accelerating progress, the synthesis which illuminates it.

What is the historical synthesis which is revealed to us by the colonies? Think of a group of men, living in the England of the time of Elizabeth, or James I, and imagine the network of economic relations that bind them. In front of them is developing a great manufacturing system, which has just come into flower, and there is also developing, the system of great landed estates, built upon the ruins of patriarchal agriculture. Wealth is concentrating in a few hands, a financial oligarchy is taking shape; production is increasing, but it is ever more unequally distributed. In London and Manchester both rich and poor multiply. The Gothic structure of the feudal institutions is crumbling, and bourgeois property, insatiable in its lust for conquest, is freed. It is the beginning of the modern economic system which brings in its train a long wake of sorrow, greatness, and infinite misery. And now suppose that a fairylike caprice suddenly transports these British people who yesterday in the cities of the United Kingdom assumed those production relations which were based upon large-scale industry and the wages system to a virgin region, say to Pennsylvania or Virginia. Strangely enough, those same production relations become definitely impossible in this new setting, and the maintenance of fixed character, habits, and ideas is completely unable to create in the colonies the economic institutions which existed in the motherland. The same men, transported from a region where all the land was occupied, to a new region where land is available to everyone, undergo a metamorphosis, without their own volition, of the economic relations which had hitherto bound them. In the new land, in which "there is nothing old except the trees of the virgin forest," a rebirth of mankind takes place, and the economic structure of primitive Europe is recreated. Moreover, all of human progress, worked out during two thousand years of development, is unable to prevent the reproduction of the social phenomena consonant to a reproduction of the primitive external surroundings. After it has assumed a social system reproducing the primitive economy, the colony proceeds at an accelerated pace to pass through the stages of economic evolution, approaching closer and closer to the conditions of its motherland. Finally it attains that position, but not, however, without having passed through four stages, four eras, the same ones which the older Europeans had to undergo, during the course of several centuries, in order to go from the primitive condition to their present economic system.

Finally, in this accelerated metamorphosis of economic relations in the colonies, the decadence and death of each economic form is preceded by a metamorphosis in the conditions of landed property, or in the degree of productivity of the marginal land. However, it is not preceded by any noticeable metamorphosis in the intellectual, or more generally subjective, human conditions.

Such is the history of modern colonies. But a study of medieval and ancient colonies would show us the reproduction of the same phenomena; the colony, if medieval, beginning with a primitive economic form and going through three stages, or, if ancient, two stages, in the direction of the social conditions of its motherland. In fact, one notices in the ancient colonies a first stage in which either common or small property is predominant, and it is only in a later period that slavery is introduced . . . .[100]

But even if we limit ourselves to contemplating social evolution in modern colonies, we can readily grasp the revelation they bring to the science of history. If the colonies assume production relations opposite to those of the motherland despite the psychological identity of their inhabitants and those of the home country, if the men transposed into a virgin land themselves begin, as a result of necessity, social relations opposite to those to which they were subjected in the old land, at the very least this indicates that social phenomena, both

[100] An illustration of this point from ancient and medieval times is omitted from this translation. L. B.

in the old and new fatherland, are not exclusively the result of man, but are partly due to physiographical conditions. But then, when one sees that the economic relations assumed by the growing colonies present a profound identity with those assumed by primitive mankind, where the land situation was identical to that of the colonies, despite the fact that the social conditioning of the men was absolutely different, the most positive conclusion may be reached that the cause of social phenomena is not man but rather the natural environment. Thus, if we have only two possible factors to explain social phenomena, man and the earth; if with a set of man-made institutions common to both societies we can have completely different social conditions, and with identical landed conditions we necessarily have identical social conditions, we are forced to conclude that the moving force of the social process is land, and man is not the agent of this process but its spectator.

The importance of this result is easily seen. The theory of the economic development of colonies as summarized above destroys all philosophical systems which find intelligence, or its various manifestations, as the cause of the historical movement of mankind. How can we admit Comte and Buckle's theorem that social phenomena are the product of intellectual development, or the Hegelian concept that history is the evolving expression of the idea; how can we admit [Ferdinand] Lassalle's aphorism that the human spirit is the creator of history; when it is demonstrated that a new society, though fortified by the intellectual and material heritage accumulated by a hundred previous generations, finds itself forced to assume the economic relations of the primitive era, solely because it settles down in a free land, in the same situation that primitive man found himself. Colonial civilization, arising from natural physical conditions, and independent of the psychological conditioning of man, is contrary to the concept of human civilization dependent upon the intellectual and moral development of society. It strengthens the concept of a close dependence of social history upon nature, and the concept of a great and mechanical synthesis of man and his environment.

If, in respect to these phases, research on colonial evolution makes a great contribution to the science of history, it does not bring less splendid light to the economic doctrines; for one law is revealed by the entire history of the colonies, *i.e.*, landed property is not only a factor of the economic organism, but it is the pedestal upon which the whole social system is built. To us, citizens of Western Europe, inclined to attribute to the production system an exclusive influence in the modern economy because of the wonders of industrial manufacturing, to us, such a concept appears to be a reproduction in different terms of the physiocratic prejudice. However, where the modern industrial process is not yet dominant, or at least to date does not overshadow the economic importance of landed property, as in Russia, or even more so in the colonies, in those places writers employ a synthesis based more upon land, and therefore more true to economic phenomena. It is not long since that a distinguished Russian publicist [Wassiltschikoff] pointed out with good reason:

> In all the profound speculations on the labor question, in all the sterile devices invented to conciliate capital and labor (devices which resemble a small beam joining two enormous walls), one forgets that under the larvae of the labor question, another essential question is nestled, the land question, and that the very profound cause of the social ills troubling Western Europe, lays in the harmful effects upon the major part of the population of exclusion from landed property.

And a few years later, from the opposite shore of the Atlantic, an impartial observer [Henry George] noticed:

> It is not in the relation between capital and labor that one has to look for the explanation of the differentiated development of our civilization. The basic cause of the inequality in the distribution of wealth is the inequality in landed property; for landed property is the fundamental phenomena which determines the social, political, economic condition of each nation.

Yes, in the modern age, as in the olden one, landed property is the dominating phenomenon of the entire economy; and in this respect, the present differs from the past only in the fact that the relations of landed property were then responsible for a bloody revolution while that is not true of our age; since in the olden times developments manifested themselves, opposite to those noted by [Dietrich Hermann] Hegewisch that finances and taxes have provoked frequent revolutions in modern states, but this was not so in the ancient ones.

Such are the results that arise from research into the genesis and social development of modern colonies; this is the subject with which we propose to deal. Edward Gans, to observe the history of

law, placed himself on the Capitoline hill and, glancing with eyes looking backward and forward simultaneously at both pre-Roman and post-Roman history, attempts to deduce from their contrast with Roman history, the hidden meaning of man's historical development. We put ourselves in the glorious setting of young liberty and, observing from it the economic development of the European world, we wish to abstract from a comparison of it with colonial development the profound and synthetic meaning of all social development. This research, let us admit, requires long and difficult work, but it is well worth the effort and repays it abundantly. From the New York factories and the Dakota fields comes a light, which projected over the medieval ruins, over the ruins of antiquity and of the primitive barbarian ages, enlightens them with a sudden splendor, gives life to their fossil remains, interprets the mysterious characters which they have written upon them, and removes their secret from them, together with our own secret as well. America offers the key to the historical enigma which Europe has sought for centuries in vain, and the country that has no history reflects and reveals luminously the mystery of universal history.

## THE DISPOSAL OF THE PUBLIC DOMAIN ON THE TRANS-MISSISSIPPI PLAINS: SOME OPPORTUNITIES FOR INVESTIGATION

THOMAS LE DUC

*Department of History, Oberlin College*

Of all the peacetime activities of the Federal Government in the nineteenth century, none was more fateful than the transfer of three-quarters of a billion acres of natural resources from public to private ownership.* In the making and administering of policy, the government assumed no other responsibility so formidable in extent and so meaningful to posterity. What kind of job did democratic government do?

The history of the disposal of the public lands remains to be written. It may not be written in our generation. It will not be written unless we ask ourselves the right questions and then devise the methods that will enable us to answer them.

One wonders whether we have been asking the right questions and whether we have been making the correct assumptions. Have we, for example, escaped the great American fallacy that laws are self-enforcing? Historians have generally concentrated—although there is still much to be done—on the legislative and policy-making stages of land history. Should we not now try to emphasize not only the stated intent of the laws but also the actual operational behavior in the larger context of environment: economic, political, and physical? This is to say, simply, that the closing of the public domain is not an event but a process—indeed, a complex of several interrelated processes. One is forced to ask whether the meaning and effect of public policy can be accurately judged from the course of political debate, or even from the tabulation of patents issued by the General Land Office. Do we not have to follow the process further, examining actual land use, and searching for the date when ownership became stabilized? Entry is only a step, never insignificant, but often false or tentative.

Public policy does not operate in a vacuum. Its operation is related to the operation of other strategic factors in the field. We have to note, at appropriate points, the significance, for a specific land policy, of the incidence of other land policies, of actual practices of administration, of dynamic factors in the total economy, of the physical environment, and of the character of private enterprise.

This complexity is real. We cannot escape the interplay of diverse elements. The central theme of this article is the need for developing, in studies of the agricultural lands of the trans-Mississippi plains, methods that will integrate the diversity in a credible way. To see the problem, however, it is necessary to pursue a few themes individually.

We might first reconsider the widespread assumption that 1862 is the great dividing line in federal land legislation. Scholars seem generally to have accepted the concept that the wartime land laws represent a distinct break with the ante-

* This article was presented at a session on opportunities for research at the annual meeting of the Mississippi Valley Historical Association at Oklahoma City, Oklahoma, on April 21, 1950.

bellum period. But would not 1846 be a better "year of decision"? In that year came the big river-improvement grants. From 1846 to 1856 came the vast land bonuses to military veterans. From 1845 to 1852 one notes the substantial canal grants. In 1848 the school-land donations were doubled. And in 1850 we see the Swamp Lands Act, the portentous grant to the Illinois Central Railroad, and the Oregon State donation, really the first homestead act.

The total acreage appropriated under these laws is small when compared with the amount transferred by the transcontinental railroad grants, the Homestead Act, and the Land-Grant College Act. But in these laws of the late forties we see the final degradation of the tradition of using public land to finance public beneficence. Here, more frankly than in the wartime legislation, is the practice of using purported public beneficence to justify what in fact was beneficence to speculators. If we are looking for legislation incongruous to the Homestead Act, we must look not only to the Civil War grants but back to the Polk and Pierce days. These laws, together with a number of others adopted before 1862, were activated to a very great extent in the corn-belt States and before the passage of the homestead law. They operated, as many of the Pacific railroad grants did not, to diminish homesteading in the humid areas. The strategic position of the military bounties, for instance, in closing high-grade lands to homesteading, can scarcely be exaggerated.

This theme of land quality suggests that we need to introduce into our land studies more precise differentiations of land types based on the findings of the geographers. Taking our cue from the estimable Thomas Donaldson and from the 1905 report of Theodore Roosevelt's Public Lands Commission, we have laid too much stress on mere quantity. This has led us to minimize corn-belt and cotton-belt transfers and to take an exaggerated view of the significance of the vast desert appropriations. Paul W. Gates, concentrating for twenty years on the history of the humid lands, and relating title turnover to crop practices, soil differences, and marketing structures, has led us toward more realistic and qualitative appraisals.

We need to apply the same kinds of discrimination to the trans-Missouri region. Here, indeed, there is an even greater need to apply the available knowledge of ecologic factors, for here the role of natural environment has been even more critical. But historians have generally steered away from exploiting the extensive and useful work of the scientists. The natural environment has been viewed as static rather than dynamic. The total ecologic interplay of climate, soil mechanics, macroorganism, and microorganism as an elaborate and continuing process is noticed by James C. Malin of the University of Kansas but is generally ignored by other professional historians working on the trans-Missouri country.

We have used a few simple and almost meaningless concepts like average crude rainfall, without making adjustments for evaporation and transpiration rates. We have talked blandly about the boundary of 24-inch rainfall, without remembering that 17 inches on the Canadian boundary is probably the equivalent of 27 inches on the Rio Grande. And we have tried to write history, as some have tried to farm: by long-term averages. But the distinguishing element in trans-Missouri precipitation and the critical element in patterns of land use is not averages but year-to-year fluctuations. Earth may be the mother, but climate is the grandmother: nursing and controlling organic life and, by leaching, glaciation, and erosion of wind and water, working changes in terrain and in soil. If historians have emphasized legislative policy making and neglected the role of the physical environment in determining the patterns of adaptation and land use, it is possibly because they are not aware of the immense body of scientific learning now available. In fairness, however, it should be added that the perennial revisions of the ecologic sciences is to the layman perplexing if not indeed dismaying. C. Warren Thornthwaite's *Atlas of Climatic Types in the United States, 1900-1939*, published in 1941, is based on a formula that is now considered obsolete. Progress in soil science has been equally revolutionary. One may note, nonetheless, that the student of land history working with specific quarter-quarter-sections does not often find that revisions in climatology and pedology seriously disturb the description of particular farms. And he will be aware that rarely are the ecologic factors determining to the exclusion of human factors.

It is rather more difficult to evaluate human factors, both in land use and in public administration. But we have been slow to explore the actual administration of the General Land Office. We have long known that mass nullification and executive negligence combined to make many provisions

of the land laws largely inoperative. If this is true, then policy making is less relevant to land occupation than the normal practices of public administration. There is, curiously, no study of the administration of the regional land offices and only the sketchiest accounts of the work of the General Land Office. And this, I remind you, was the largest job of administration ever undertaken by the Federal Government in peacetime. In the fiscal year 1883, for example, the land offices processed 27 million acres. The executive, then and earlier, found it easier to issue patents to all comers than to make effective checks on the authenticity of the applications. That widespread fraud resulted from this negligence is well known. William A. J. Sparks, Commissioner of the General Land Office, estimated the percentage of fraud as something like this: Standard 5-year homesteads, 40 percent; Timber claims, 90 percent; Preemptions, 100 percent; and commuted homesteads, 100 percent. Historians have never discredited these estimates, nor, so far as I know, even challenged them. They have, rather, developed a curious bifocalism that identifies land fraud as a monopoly of the big, absentee operators. But perjury is not defined as a felony by the domicile of the affiant or by the size of the grab.

To correct this popular delusion that fraud was a monopoly of the monopolists we must analyze actual operations and occupancy under the land laws. We need to follow our petty entrymen from the tract books to the census rolls and the assessors' lists. How many of our sworn occupants and improvers of the soil shall we find in these records of reality?

One preliminary tool that we most urgently need in this connection is an index of entrymen. The General Land Office was required to administer laws that forbade repeat entries of various kinds. Under the Homestead Act, for instance, the original entry, even if not perfected to final patent, exhausted the applicant's rights under the law. How many persons homesteaded more than once? Don't ask the United States Government; the General Land Office never had any practicable way of determining the answer, and it appears never to have taken any effective steps to check the practice. Its files were a jumble of chronological records wholly lacking in alphabetical indexes.

The big frauds and the big investment operations and the big speculations have been made more conspicuous, but the aggregate acreage of high-quality land involved in the petty perjuries remains unknown. It would be interesting, incidentally, to know more about the attitudes of the churches toward individual and corporate land frauds.

But let us turn from these disagreeable reminders of the activities of the pioneers to the role of the real devils of land administration: the grantees and the speculators.

The relation of the land-grant railroads to the process of settlement is still imperfectly understood. The tendency has generally been to look at the gross acreage with a view to estimating the fairness of the contracts of subsidy. Few qualitative differentiations about the land actually alienated have been ventured. If anyone has made such a study for the Union Pacific Railroad, for example, I must confess ignorance of it. Investigations now under way seem to reveal that the U. P. secured only 40 percent of its nominal grant in the six most accessible counties of the most valuable humid lands in Nebraska. In those six counties land lost to the railroad by prior private entry totaled 400,000 acres.

We should ask, too, how the settlers brought in by the railroads compared in efficiency with the homesteaders. No opinion is here ventured except that the subject invites investigation. Admittedly, it will not be easy to reach conclusions that will be universally accepted. But one index of efficiency would be stability of ownership. What was the ratio of defaults on purchase contracts and how did these defaults affect actual land use? How much tenancy was there on railroad lands? A study of railroad lands in these respects should be made in comparison with patterns of default and lapse on public lands and on lands sold by entrepreneurs. Another significant aspect of the management of railroad lands is the question of idleness. Were the railroad lands kept idle as so many of the homesteads, scrip entries, and State lands?

We must keep our eyes focused on the process of settlement and land use. To understand it we must make comparative studies that will trace the simultaneous operation of varied and often contradictory land policies in an environment more diversified than some investigators seem to understand.

Of even greater significance than the railroad grants in the occupation of the arable lands was the management of land scrip issued to military veterans, to miscellaneous private claimants, and to the agricultural colleges of the Eastern States.

It is not only quantitatively significant—80 million acres—but qualitatively even more important. The scrip was issued and most of it located before the good lands were gone, and much of it, indeed, even before the Homestead Act was passed. Its value and its meaning in the closing of the public domain was further enhanced by the fact that the holders or assignees could choose their lands as the railroads normally could not.

We should like to know a lot more about the scrip brokers and about the ultimate use of the scrip. How far did these brokers influence legislation? What were their services in securing authentication of bounties for individual veterans and their heirs? How was the scrip marketed; who actually bought it, and in what amounts? What was the effect on land settlement and use if one broker secured, as he boasted, the control of 92 percent of all agricultural college scrip? Is it also true, as he asserted, that his congressional pals slipped into the Land-Grant College Act the joker requiring the Eastern States to sell their scrip rather than locate it themselves?

In a word, we must recognize frankly that much of the subsidy legislation for the aid of education, transportation, irrigation, and other public purposes used the purported benevolence merely as a guise for unloading the public land faster than the settlers could take it up. Acts to relieve the heirs of deceased veterans might better be termed acts to relieve the people of the United States of their public land.

Even more conspicuously neglected by historians is the role of the Western States as grantees and middlemen. Kansas, Iowa, Nebraska, the Dakotas, and Wyoming each took about 7 percent of the entire area of these States. Minnesota, like Wisconsin, took 15 percent. In Idaho grants to the State exceeded grants to the railroads. In Iowa the State lands comprised an area double the aggregate area of all the homesteads.

The disposition of these lands was wholly in the hands of the State legislatures. Did these farmer governments use these grants for public benefit and hold out for high prices, or did they respond to the demands of land-seeking farmers and speculators? What was the unit of sale and what was the progress of sales in relation to transfers of the public domain and railroad grants in adjacent sections? How, in a word, did the policies of the States interact with other policies of land disposition?

Here, certainly, is an opportunity for extensive and rewarding research in the State universities of the Plains States. Why it has been so long neglected is something of a mystery, related perhaps to the reluctance of some westerners to recognize that their own State governments were middlemen in land as big as some of the railroads and bigger than most of the individual speculators.

As to homesteads, we appear still to be suffering from the ambiguities of Frederick Jackson Turner. It is too little recognized even now that the homestead law was not enacted until most of the prairie land in the humid zone had been otherwise entered. In the band of States from Ohio to Iowa, the prize agricultural area of the United States, only 10,000 final-entry homesteads are recorded. Even in Iowa, the farthest west and the last settled, less than 3 percent of the land was homesteaded. Taking the second tier of States west of the Mississippi, Kansas, Nebraska, and the Dakotas—and including the homesteads fecklessly entered in the arid zones—less than 20 percent of the whole area was homesteaded. Systematic investigations, now in progress, seem to show that the actual number of stable homesteads in the humid belt of Nebraska is trifling.

We need a more realistic analysis of homesteading that will qualify the gross figures in a variety of ways. How many of the entries were made in soil and climatic areas where 160 acres was a dependable unit for the support of a farm family? What is the ratio of cancelled entries—abandonments and relinquishments—to sustained and purposeful entry? In Nebraska the ratio is 2.3 cancellations for each final entry; the ratio is slightly lower for Kansas and Minnesota; the ratio for these three States taken together is 2.1 to 1. How many of these cancellations represent abandonments by novices ill-suited to undertake farm enterprise? And how many of them represent the petty blackmail of roving opportunists who entered land and held it without cultivation or improvement until a bona fide settler came along and paid for a relinquishment? And how many of them were dummy entries for large investors? How do these negative entries correlate with the exhaustion of the supply of grant lands of the railroads and the State governments? These lapses of entry have been almost ignored by historians, perhaps because systematic analysis requires fairly elaborate detective work, but they will repay the effort by pro-

ducing a more realistic picture of the operations of the individual entrepreneur.

Related in kind to the fraud of selling relinquishments are the practices, not always fraudulent, that arose in the commutation of homestead entries by cash payment or use of land scrip. Commutation, for practical purposes, was the equivalent of preemption, and its privileges remained available after the well-publicized repeal of preemption in 1891. Doubtless some bona fide entrymen used commutation as a way of securing an immediate title on which they could borrow money. But the evidence suggests that commutation was frequently used as a device by which a host of nonresident entrymen commuted their fake homesteads in cash advanced by investors with whom they had illegally contracted to sell their land.

The high ratio of commutations in prosperity and the comparatively low ratio in hard times and the high number of quick sales soon after commutation attract the attention of the investigator. But the General Land Office not only left the fraud unchecked during the nineteenth century but even failed before 1881 to tabulate the extent of commutation. For the subsequent twenty-three years, the official records show that the ratio of commuted homesteads to standard 5-year homesteads is 1 to 4. In some land offices commutation rose as high as 90 percent. The procedure was simplicity itself. Urban dwellers and members of farm families could enter a homestead and, thanks to a complaisant administration, ignore the residence and cultivation requirements. Fourteen months later they would find themselves owners of a property worth $1,500 to $2,000. The operation of the commutation provisions of the law demonstrates again the necessity of tracing landownership past the point of patent from the public domain.

We must do this also for the 5-year patents. If we are to understand the relation of the land laws to use and occupation, we should look at the subsequent history of homesteads and of other outright titles to see how long they remained unencumbered. There is great need for studying the growth of tenantry. Someone has said that tenancy is to agriculture what unemployment is to industry: the element that provides the needed elasticity in an enterprise with high fixed costs, substantial capital requirements, and wide fluctuations in the market.

Our understanding of the actual dynamics of tenantry on the plains is primitive. We must put aside the easy generalities about the diabolical forces that got the better of the honest farmer. It will be more helpful, perhaps, if we attempt to connect the growth of tenantry with the fundamental changes wrought in plains farming in the late nineteenth century. It should be obvious that the economic structure was transformed as the cost picture became more rigid and the fluctuations of income wider. The external rigidities bore more heavily where environmental factors dictated high specialization. When specialization took place in zones where the annual fluctuations of ecologic variables—climate, bugs, and blights—were most pronounced, we have to evaluate not merely extrinsic economic factors but also the effectiveness of adaptations to an environment that was never static. We must, in summary, raise the question whether the basic explanation of tenantry lies in the activities of predatory interests so much as in the inherent weakness of the ecologic adjustment.

Environmental influences and unscientific use of the land, with resultant economic disaster, are more easily demonstrable in geographic belts of established aridity than in the transitional zones. Someone should get busy, therefore, with a systematic evaluation of the working of the Kinkaid Act and the Enlarged Homestead Act. These attempts to impose on the range lands the institution of small-scale owner operation may not have proven as intelligent a program of resources conservation as the publicity staff of Theodore Roosevelt would have us believe.

We must subject their assertions and the assertions of local optimists like Addison E. Sheldon of Nebraska to conscientious analysis. We must take our historical researches beyond the columns of the chauvinistic newspapers of the short-grass country. The real answers will be found in the census returns, in the original records of the land office, and in the county records of title and mortgage. These data must be interpreted in relation to the recent contributions of the soil and climate scientists and in relation to the economics of the range cattle industry.

From the foregoing mélange of comments about the state of historical research on the public lands of the trans-Mississippi west, we may suggest a few tentative conclusions:

1. The actual closing of the public domain by original entry is not as critical a factor as has been generally assumed. If our central theme is human occupation rather than the antiquarian quest for

"firsts," we must pursue our study beyond the original entry and indeed beyond the first patent. We cannot leave unnoticed the high turnover of title in early years or the high ratio of idle land in the hands of private entrymen.

2. We must give to small entries the same searching examination that has been bestowed on large grants and purchases.

3. We must employ more exact and elaborate differentiations of natural ecologic factors. As we cross the Missouri River and move into transitional zones and then move further into the distinctive high plains regions, our need to understand the physical and biologic factors is even greater.

4. We cannot understand the operation of a particular land policy without studying it in the total context of other policies, of administrative practices, and of the natural environment. We must learn how to process the mass of data in manageable chunks.

These simple conclusions seem to add up to a first-class problem of methods. If piecemeal, monographic study along traditional lines must be rejected in favor of a holistic and evolutionary approach, then how shall we go about organizing a more systematic and adequate operational analysis of the total process?

For historians, the practical problem is that of managing a vast quantity of records. It will be at once apparent that sampling methods will be of almost no use in these researches. Because the variables are so many the number of combinations and permutations would be so great that a sample would approach the universe. We may just as well do the whole field and avoid at once the inevitable errors of sampling and the inevitable challenge to the method.

Just as we must reject sampling, so must we reject a procedure that would accumulate a large number of intensive studies in small areas. Sound conclusions for the area cannot be drawn by such a myopic process, and sound generalizations cannot be drawn from an aggregation of such studies.

It is clear, however, that a geographic approach makes more sense than a purely topical one. The size of the unit to be studied must be established empirically. We must ignore arbitrary political boundaries and set up our units in functional relation to ecologic process, to the fundamental object of our study, namely the course of human settlement and adaptation in new environments. Instead of setting up regional boundaries a priori, why not let our findings draw them for us? Why not sort our data and see where the lines emerge?

This means work and a lot of it. We must process the data describing the resources and the data describing scores of thousands of transactions for millions of acres. No one man can do it.

One project, now at an experimental stage, is designed to develop and test methods for cooperative research in a coordinated program that will cover a large area intensively. We hope to assemble in one place, and indeed in a single series of summaries arranged geographically, the data relating to land use over a period of thirty-five years after the opening of the domain. We are experimenting with new-fangled techniques of mechanical sorting that are always suspect to the academic historian. We suspect them, but we propose to go forward with confidence that if they prove unworkable we can find other methods that will permit us to come closer to certainty than we have yet come in this particular field of research.

We have tried to put aside as many presuppositions as we can recognize. We make no assumptions about cultural faults, safety valves, or the glories of pioneer democracy. We think that just possibly what historical scholarship most needs in our time is a return to the scientific ideal of analyzing all the data. We are neither dismayed by the size of the job, nor distraught by the counsel of the relativists who tell us that our certainties are bound to be either pointless or poisoned. If they are correct we may as well merge the Mississippi Valley Historical Association with the nearest public-relations agency—public or private.

# COLLECTIVE BARGAINING IN THE LUMBER INDUSTRY OF THE UPPER GREAT LAKES STATES

GEORGE B. ENGBERG

*Department of History, University of Cincinnati*

The basic timber industry of the upper Great Lakes States provides an example of the use of collective bargaining in a frontier industry.[1] Early in the nineteenth century the lumber industry became an important employer of men and capital in Michigan, Wisconsin, and Minnesota. Lumberjacks, rivermen, and sawmill operatives joined in opposition to employers as early as the 1850s. Although most of their early strikes and unions were not particularly successful, the workers have persisted in joint action until the present time. Their efforts help to explain the progress of the industry and the part which collective bargaining has played in the economy of the upper Midwest.

The first attempts at collective bargaining in the lumber industry of the Great Lakes States were so crude that they hardly deserved the name. They were, rather, spontaneous outbursts aiming to improve the conditions of labor without going through a preliminary stage of labor organization. Minnesota lumberjacks and rivermen who struck for payment of overdue wages and for higher pay at Saint Anthony and Stillwater in 1858 and 1863 were not organized in unions and partly for that reason had little or no success. Strikers at the Crapo mills in Flint, Michigan, in 1864 also appear to have acted without unionization, but they did have some success in pressing their demand for higher wages. Some stirrings toward unionization appeared, however, during the sixties and the seventies. An association of river drivers was reported as having been organized at Black River Falls, Wisconsin, in 1869. A strike of sawmill workers in the Saginaw Valley in 1872 brought trade journal criticism of outside leadership. The Chippewa Valley Workingmen's Association formed in 1879 doubtless was concerned with the lumber workers in that predominantly lumbering area.[2]

For most of the strikes in the lumber industry during the nineteenth century, there is no indication that a union was present. Meetings of dissatisfied workers were held, leaders appeared, and mass action took place in the form of joint refusal to work and in the staging of parades. Only in rare situations did formally organized unions exist before strikes, and the organizations hastily effected during the disputes seldom lasted after the strikes had ended or the mills closed down. Of the 114 strikes which the author has tabulated for the years between 1850 and 1906, unions were certainly organized before or during the work stoppage in only 18 cases. In 19 disputes it appears that no union existed, and in the remaining 77 the records do not indicate whether or not any organization was established. Lack of mention of a union raises the supposition that none existed in many instances. A compilation by the United States Commissioner of Labor of 136 strikes between 1881 and 1905 indicates that 63 were ordered by labor organizations.[3]

[1] This article was presented at the session of the Forest Products History Foundation with the Mississippi Valley Historical Association at Oklahoma City, Oklahoma, on Apr. 20, 1950.

[2] *Daily Minnesotian* (St. Paul), June 8, 1858, p. 2; *Stillwater Messenger*, June 15, 1858, p. 2, Oct. 6, 1863, p. 3; entries for June 29 through July 8 in Diary for 1864, Henry H. Crapo Papers, Michigan Historical Collections, Ann Arbor; Frederick Merk, *Economic History of Wisconsin During the Civil War Decade* (Madison, 1916), 109; *Lumberman's Gazette* (Bay City, Mich.), July 1872, p. 1; *Eau Claire Free Press*, Oct. 16, 1879, p. 3.

[3] The tabulation by the author was made from trade journals, newspapers in lumbering centers, company records, and the reports of State and Federal bureaus of labor. See also U. S. Commissioner of Labor, *Annual Report, 1901*, 296–299, and *1906*, 244–263, 408–419. A more extended discussion with fuller references for this and the following topics is found in George B. Engberg, Labor in the Lake States Lumber Industry: 1830–1930 (Ph.D. thesis, University of Minnesota, 1949), ch. 9.

The objectives of strikes and labor organizations in the lumber industry were similar to those in other industries. The tabulation of the 114 strikes indicated that 58, or approximately one-half, were primarily concerned with obtaining increases or preventing decreases in pay. Attempts to obtain shorter hours, especially to secure a 10-hour day without a reduction in pay, accounted for 33 of the 114 strikes. In 10 instances the objectives fell in a miscellaneous category composed of such demands as regular pay days and cash wage payments. The strikes covered in the federal report affected nearly 500 establishments, over 400 of which were closed for an average of 20.3 days. The total number of strikers was about 35,000, but the work stoppages threw more than 48,000 employees out of work. Most of the strikes failed to achieve the announced objectives, but since results were measured against the strikers' demands, partial success may have represented all that was reasonably expected. In other cases realization of demands came in later months or during subsequent seasons. Such strikes were recorded as failures when reports were made, but they really were successful in the long run.

In the eighties the Knights of Labor became an important factor in the lumber industry of the Great Lakes States. No local assemblies were listed for the lumber towns of the Lakes States in 1880, but by 1882 the Knights were making progress in the Saginaw Valley and other Michigan lumber centers such as Muskegon, Grand Haven, and Port Huron. Many of the men who worked in the sawmills of the Bay and Saginaw districts were members of the Knights, and more joined during the great 10-hour strikes of 1885. On the Wisconsin side, assemblies of the Knights also existed in important lumber cities and towns such as Eau Claire, Oshkosh, Peshtigo, and Wausau. The Eau Claire assembly grew to nearly a thousand members in 1886 and split into two groups because its hall was not large enough to accommodate the crowds. Important Minnesota lumbering centers also appeared on the roster of assemblies of the Knights. One of the Minneapolis groups was listed as a lumbermen's assembly; another was organized by lath sawyers and shingle weavers. The precipitous decline of the national organization after 1886 was accompanied by its virtual elimination as a power in lumber centers.[4]

Following the decline of the Knights of Labor, some of the lumber workers established other unions. Branches of the North Wisconsin Mill Men's Union were formed at Ashland, Eau Claire, Rhinelander, Stevens Point, and Washburn between 1890 and 1893. By 1894 the Ashland local was listed as No. 5470 of the American Federation of Labor. At Eau Claire a Log Drivers' and Rivermen's Union had seven hundred members by 1895 and was branching out to help organize a similar group at Chippewa Falls. Leaders of these unions were also active in the work of the People's Party. By 1894 Minneapolis had a branch of the National Saw Filers' Association which was attracting visiting filers from Eau Claire and other Wisconsin and Minnesota sawmill towns. Mill workers at Cloquet, Minnesota, organized and affiliated with the A. F. of L. in 1896. Sawmill workers in Minneapolis were unorganized until 1899 when a rather halting start was made. Stillwater sawmill employees organized in 1902, and those at Little Falls in 1903; the union at the latter place became a branch of the Longshoremen's Union at Duluth. The Machine Wood Workers International Union of America, which was concerned primarily with the woodworking industries rather than the basic timber industry, had locals in over twenty cities scattered through the three upper Lakes States between 1893 and 1897. The shingle weavers organized early and struck often, thus setting an example for less cohesive groups. They were unionized at Ludington and Manistee, Michigan, by 1882, and organized the first local of the International Shingle Weavers of America at Muskegon in 1886. In 1911 ten locals existed in Michigan and Wisconsin, although by that date the bulk of the union membership was located in the Pacific Northwest.[5]

[4] *Journal of United Labor* (official journal of the Knights of Labor of America, published at Marblehead, Mass., and Philadelphia), May 15, 1880, p. 4–7; *Unionist* (Detroit), July 24, 1882, p. 2, Mar. 5, 1883, p. 3; Knights of Labor, Michigan State Assembly, *Proceedings of the First Regular Assembly* (Detroit, 1884), 4; Sidney Glaser, Labor and Agrarian Movements in Michigan, 1876–1896 (Ph.D. thesis, University of Michigan, 1932), 42, n. 14; Knights of Labor of America, *Record of Proceedings of the General Assembly* (Richmond, Va., 1886), 326–328; Wisconsin Bureau of Labor and Industrial Statistics, *Biennial Report, 1887–88*, 36–45; *Eau Claire Weekly Free Press*, Jan. 28, 1886, p. 3; George B. Engberg, The Rise of Organized Labor in Minnesota, 1850–1890 (M.A. thesis, University of Minnesota, 1939), 125–127.

[5] *Ashland Press*, July 12, 1890, p. 1; *Weekly Free Press* (Eau Claire), July 17, 1890, p. 3; Mill Men's

Although the amount of unionization of the workers in the basic timber industry was not great during the nineteenth century, a few outstanding strikes occurred. Some strikes involved only one mill or one community; others, spreading rapidly to several communities, became strike waves. A few of the strikes came after unions had been formed; more led to the formation of temporary organizations; a few progressed without formal machinery.

A serious disturbance occurred at Eau Claire in July 1881, when a thousand or more sawmill workers struck. They demanded a 10-hour day in place of the usual 11 or 12 hours, and asked that the 20 percent withheld from their pay until the end of the season be paid when earned. They also requested that the company boardinghouses be kept open for the benefit of the strikers. The strike started at 6 o'clock one morning when the men at one mill left their jobs, went the rounds of the other mills, and forced them to shut down. The employers refused to grant the demands when they were presented by a strikers' committee. The mayor closed the saloons, prepared to swear in special police, and called on the governor for troops. The eight companies of State militia which were sent to the scene had little to do except guard the jail in which the strike leaders had been incarcerated on charges of promoting a riot. At the end of a week most of the mills were back in operation, many of the strikers had left town, and the militiamen were returning home from the "Sawdust Campaign." Perhaps the most famous veteran of that campaign was Frederick Jackson Turner, historian of the frontier. The workers gained little but the satisfaction of having participated in one of the opening battles of the struggle for the 10-hour day in the sawmills of the Lakes States.[6]

When the Michigan legislature passed a 10-hour law in June 1885, to become effective the following September, it created an interim period that brought on the two most serious strikes that occurred in the lumber industry of the Lakes States during the nineteenth century. In the Saginaw Valley the strike started around Bay City on July 6 when some laborers decided not to wait until September for the 10-hour day. Within a few days all of the sawmills in the vicinity had shut down, and a delegation of 800 men had gone to Saginaw to persuade the workers in that city to join the walkout. The position of the strikers was strengthened by the fact that most of the city officials of Saginaw, East Saginaw, and Bay City were members of Knights of Labor. The principal leader was Thomas R. Barry, a member of the general executive board of the Knights, who had been elected to the State legislature on a Democratic-Greenback ticket. Although the strike was conducted in an orderly manner, Governor Russell A. Alger, a millionaire lumberman, was easily persuaded to send in 10 companies of State militia. The arrival of 150 Pinkerton "detectives" from Chicago also contributed to the tenseness of the situation. The troops and Pinkerton men were withdrawn by the middle of July, but it was not until August that concessions by a few mill owners brought some of the men back to work. By the first of September all of the mills had resumed operations. Some mills operated on a 10-hour basis and with a cut of one-eleventh in wages, but more had the same hours and same wages as before the strike. On September 18 when the 10-hour law went into effect nearly all the manufacturers adopted the 10-hour day, generally with a cut in wages. About 80 firms with over 5,000 employees were closed for an average of 32 days in a strike that was expensive for the workers but did help the owners slightly by raising the price of lumber.[7]

Federated Union of Rhinelander, Wisconsin, *Constitution and By-Laws* (Milwaukee, 1892), *passim*; *Weekly Herald* (Chippewa Falls), July 27, 1894, p. 1; *Mississippi Valley Lumberman* (Minneapolis), Apr. 10, 1891, p. 6, Oct. 25, 1894, p. 12; C. A. Weyerhaeuser, Little Falls, Minn., to Laird-Norton Co., Winona, Feb. 23, 1903, in Laird Norton Co. Papers, Pine Tree Lumber Co., 1903, Letters Received, in company offices at Winona; *Machine Woodworker* (Chicago), January 1892, p. 16; *Lumberman's Gazette*, Aug. 8, 1892, p. 7; *Shingle Weaver* (later, *Timber Worker*, Everett and Seattle, Wash.), Feb. 8, 1913, p. 1.

[6] *Eau Claire Free Press*, July 21, 1881, p. 2, July 28, 1881, p. 2, Aug. 4, 1881, p. 2; *Madison Daily Democrat*, July 30, 1881, p. 1; Charles F. Lamb, "Sawdust Campaign," *Wisconsin Magazine of History*, 22:6–14 (September 1938).

[7] *Labor Leaf* (Detroit), Nov. 8, 1884, p. 2; *Advance and Labor Leaf*, Nov. 19, 1887, p. 1; Glaser, Labor and Agrarian Movements, 85–89, 95–98; Michigan Bureau of Labor and Industrial Statistics, *Annual Report, 1886*, 92–125; Saginaw Board of Trade, *Fifth Annual Review of the Saginaw Board of Trade, Showing the Commerce, Manufactures and Material Resources of the Saginaw Valley. . . for A.D. 1885* (East Saginaw, 1886), 24–26, 43; *Evening News* (Detroit), July 16 and 17, 1885; *Northwestern Lumberman* (Chicago), July 18, 1885, p. 1.

In the Menominee River Valley on the Michigan-Wisconsin boundary a similar dispute took place during the fall of 1885. The sawmill workers started to organize in July in anticipation of a struggle to reduce the working day from 11½ hours to 10. The Menominee River Laboring Men's Protective and Benevolent Union was chartered by the Knights of Labor, and a weekly newspaper, the *Menominee River Laborer*, was published at Marinette on the Wisconsin side. By the first of August the mill owners had posted notice of an extension of the dinner hour from one-half to a full hour, a move which reduced the working day from 11½ to 11 hours. After the Michigan 10-hour law became effective, the sawmill proprietors at Menominee asked their men to sign agreements to work an 11-hour day. All except 260 men refused to sign, and the strike began as a result of the ultimatum of the employers.

On October 14 about a thousand strikers surrounded the Kirby-Carpenter Company boardinghouse in order to prevent the nonunion men from going to work. This action reduced the available working force on both sides of the river and led to a combination strike and lockout. The Wisconsin mills would have been forced to close within a short time anyway because the boom company could not sort logs. The strike dragged on to an inconclusive and unsatisfactory close during the remaining weeks of the sawing season. Some mills reopened with short crews; others closed and sent the available men into the woods to start logging operations. Some of the men, especially those who were unmarried, left the community and went in search of jobs in railroad construction or other occupations. For the 1886 season the workers secured a 10-hour day, ample time for dinner, and cash payment of wages.[8]

The prosperous season of 1892 brought a rash of strikes for a 10-hour day. All three of the upper Great Lakes States were affected, but Wisconsin had a particularly large number. Most of these strikes appear to have been spontaneous and without previous organization. As in so many other strikes, some were won, some were lost, and many tapered off without a clear-cut victory for either side. But certainly the cause of the 10-hour day was advanced, and it was quite generally adopted in the Great Lakes States during the nineties.[9]

In the early part of the twentieth century the Industrial Workers of the World became an aggressive element on the labor front. Organized at Chicago in 1905 by a combination of western miners and socialists, the I. W. W. was soon promoting its idea of One Big Union among the migratory lumber workers of the South and West. It did not make any particular progress in the Great Lakes States lumber industry during the first ten years although a local was organized at Deer River, Minnesota, by 1910, and I. W. W. members became involved in free-speech fights at Duluth, Superior, and Minneapolis in 1911 and 1912. The members were known as "Wobblies," said to be from the Chinese distortion of I. W. W. into "I wobbly wobbly." The northern Minnesota area also became acquainted with the organization when several branches of the Metal Mine Workers' Industrial Union were formed on the Mesabi Range.[10]

In 1916 the Wobblies promoted one of the most serious strikes that the lumber industry of northern Minnesota has ever experienced. Since the previous year the I. W. W. had been organizing lumber workers of the Pacific Northwest, Wisconsin, and Minnesota in the Agricultural Workers Organization Union No. 400. In the last week of December 1916, strikes started almost simultaneously in the sawmills and logging camps of the Virginia and Rainy Lake Lumber Company. Other firms, such as the Backus-Brooks Company, became involved, and the strike soon spread through northern Minnesota.[11]

[8] *Menominee River Laborer*, Oct. 16, 1885, p. 1; *Eagle* (Marinette), July 18 to Nov. 21, 1885 (weekly issue); Wisconsin Bureau of Labor and Industrial Statistics, *Biennial Report, 1885–86*, 238–245; *Northwestern Lumberman*, Oct, 17, 1885, p. 1, and Oct. 31, 1885, p. 1.

[9] *Mississippi Valley Lumberman*, Aug. 5, 1892, p. 1; *Eau Claire Sunday-Weekly Leader*, Aug. 21, 1892, p. 2, Aug. 28, 1892, p. 2; *Lincoln County Advocate* (Merrill, Wis.), Sept. 6, 1892, p. 1.

[10] Paul Frederick Brissenden, *The I. W. W.; A Study of American Syndicalism* (New York, 1919), *passim*; Roger N. Baldwin, "Free Speech Fights of the I. W. W.," in Industrial Workers of the World, *Twenty-Five Years of Industrial Unionism* (n.p., n.d.), 20; I. W. W., *Proceedings of the Tenth Annual Convention of the Industrial Workers of the World* (New York, 1917), 33–41.

[11] George Harrison, "Hitting the Trail in the Lumber Camps," *International Socialist Review*, 17:455–456 (February 1917); Thorstein Veblen, "Farm Labor and the I. W. W.," in his *Essays in Our Changing Social Order* (New York, 1934), 330–334; *Daily Virginian*, Dec. 26 to 30, 1916, p. 1 in each issue; *Mesaba Ore and the Hibbing News*, Jan. 6, 1917, p. 1.

The demands of the strikers were listed in a handbill issued by a strike committee in Virginia, Minnesota. They included the current grievances of both sawmill operatives and lumberjacks. For the workers in sawmills, the demands included a wage increase of 25 cents per day, the abolition of the Sunday night shift, the limitation of the Sunday day shift to 8 hours, and the alternation of the day and night shifts every week. The lumberjacks had a longer list of demands. They wanted a minimum wage of at least $40 per month, biweekly pay days, negotiable pay checks, and the same rate of pay for men who worked only a few days as for those who worked a full month. They also called for a 9-hour day, better food, washing and drying rooms for clothes, washing facilities for the men, and porcelain rather than tin tableware. In addition they wanted more bunkhouses so that not more than 16 persons should sleep in one room. The bunkhouses were to be provided with spring beds, mattresses, and blankets. They also wanted the hospital fee eliminated. Both sawmill operatives and lumberjacks demanded that there should be no discrimination against union men. The list of demands concluded with a declaration that the mill and logging-camp workers would maintain a united front until the demands of both were granted.[12]

The strike lasted through the month of January and involved, according to the union, about four thousand men. Frank H. Gillmor, superintendent of logging for the Virginia and Rainy Lake Lumber Company, testified in the legislative investigation that about a thousand, or half, of the company employees struck. Gillmor's annual report indicated that eleven of his camps were crippled for all of the month of January. Although there was practically no violence, each side charged the other with illegal activity. The strikers charged that union organizers were arrested on trumped-up charges and forced to leave the community. They also insisted that armed deputies and imported strike breakers caused the trouble that did occur. The sheriff of Carlton County found spikes driven into saw logs that reached mills at Cloquet from the strike area. This implied that the strikers were attempting to damage the saws without regard for the probable injury that would result to the sawyers. Governor J. A. A. Burnquist sided with the employers to the extent of ordering that rioters be arrested and taken to Duluth for trial rather than tried in the communities where the alleged offenses were committed.[13]

The employers worked to break the strike by using private deputies and strike breakers imported from the Twin Cities. They also claimed that many of the union demands were unreasonable. Drying rooms for clothes were not feasible because the clothing would be stolen. If the men were paid frequently they would only spend their money in "blind pigs." The camps were scrubbed out twice a week; the tinware was suitable for eating; and a doctor was available in a nearby town. Union men were not discriminated against for the company did not know that its men were unionized until they struck. The hospital fee was necessary and reasonable. Baths in camps would not be used by the men.[14]

Within a week after the beginning of the strike, some camps resumed operations with reduced crews, and the strike gradually collapsed during January. In spite of the failure of this attempt, the activities of the I. W. W. continued to enliven labor relations around the head of Lake Superior for the next three years. Strikes occurred in northern Minnesota and northern Michigan in 1919 and in all three of the upper Great Lakes States in 1920. Nevertheless, the I. W. W. was losing ground. Reports from two Minnesota camps to the national headquarters in 1918 indicated that local sentiment was hostile to the union. By 1920 the power of the Wobblies had been broken by a combination of public, employer, and government opposition.[15]

The activities of the I. W. W. alarmed State

[12] Minnesota, House of Representatives, Committee on Labor and Labor Legislation, Hearings, Labor Troubles in Northern Minnesota, January 30, 1917, 1:86–87, in the John Lind Papers, Minnesota Historical Society.

[13] *Ibid.*, 1:14, 27–32, 73–109, 163–168, 188–196, 217–218, 237–249, 282–283, 2:988–990; Frank H. Gillmor Papers, 1917, in the Minnesota Historical Society; *Daily Virginian*, Jan. 1, 4, 5, 6, 1917, p. 1 in each issue; *Solidarity* (I. W. W. newspaper published at Chicago), Jan. 27, 1917, p. 4; *Mesaba Ore*, Feb. 3, 1917, p. 4, and Feb. 14, 1917, p. 8.

[14] Labor Troubles in Northern Minnesota, as cited in note 12, and also the testimony of Frank H. Gilmore [Gillmor] in *ibid.*, 1:268–279, and of Edward W. Backus, 2:1230–1232.

[15] *Daily Virginian*, Jan. 5 and 6, 1917, p. 1; *Mesaba Ore*, Jan. 13, 1917, p. 1; *Solidarity*, Nov. 30, 1918, p. 4; Gillmor Papers, 1919, 1920; interview of author with Carl H. A. Schultz at Hermansville, Mich., Aug. 16, 1947; John S. Gambs, *The Decline of the I. W. W.*

legislatures to such an extent that they passed criminal syndicalism laws to ward off the presumed danger. Jesse Dunning, a lumberjack and former secretary of the I. W. W. local at Bemidji, was the first man convicted, not only in Minnesota, but in the United States, under a criminal syndicalism law. His offense was that of publicly displaying books teaching sabotage. The decision of the Minnesota Supreme Court upholding the law also constituted the first such decision by a State court of last resort. In 1919 the Michigan legislature passed a similar law, but action in Wisconsin was blocked by the experienced liberal elements of that State.[16]

The American Federation of Labor also entered the race to organize lumber workers. The International Union of Timberworkers was organized in 1917, merged with the International Shingle Weavers of America in 1918, and probably disbanded in 1923. By 1920 it had organized locals in Minneapolis and in seven northern Minnesota communities. It conducted partially successful strikes by 2,700 workers for an 8-hour day in the spring of 1920. Friction developed within the A. F. of L. between the United Brotherhood of Carpenters and Joiners of America on one side and the Timberworkers Union on the other. Union activity was not intense during the twenties, and when the National Industrial Recovery Administration code for the lumber industry was adopted in 1933, there were no labor organizations in existence except in the Far West.[17]

The N. R. A. Code of Fair Competition for the Lumber and Timber Products Industry provided that employees in that industry should have the same rights to organize and bargain collectively that were assured to other workers. Stimulated by the favorable attitude of the Federal Government and by the improving business conditions, lumber workers joined in aggressive unionization in the later thirties. Action came in the Pacific Northwest in 1936, when the Federation of Woodworkers was formed by a seceding faction of the United Brotherhood of Carpenters and Joiners of America. In 1937 this group changed its name to the International Woodworkers of America and affiliated with the Committee for Industrial Organization. It aimed to organize woodworkers from the stump to the finished product.[18]

Lumber workers in the upper Great Lakes States took part in this resurgent labor movement. Between 1935 and the summer of 1937 unions were quite firmly established in Minnesota, but workers in Michigan encountered bitter opposition. The Timber Workers Union carried out a peaceful and successful strike for higher wages and a closed shop in northern Minnesota in the winter of 1936–37. Victory resulted, in part, from the friendly attitude of Governor Elmer A. Benson and the Farmer-Labor Party. In April 1937, the union started publication at Duluth of the *Timber Worker;* in August it was renamed *Midwest Labor* and became the spokesman for a broader group. During the summer of that year Lumber and Sawmill Workers Local 29 shifted its allegiance from the A. F. of L. to the C. I. O. Another strike lasted about five weeks in the fall of 1937 and involved about four thousand workers. It ended with a victory over the Timber Producers Association. The terms of settlement provided a $5 increase in monthly wages, a $75 minimum for common labor in logging camps, a 10-day guarantee for piece workers, the retention of the 8-hour day, and a continuance of the union shop.[19]

In the Upper Peninsula of Michigan the struggle between labor and management became particu-

(New York, 1932), 230; Rexford G. Tugwell, "The Casual of the Woods," *Survey*, 44:472–474 (July 3, 1920).

[16] Minnesota, *Session Laws, 1917*, ch. 215; *Minneapolis Journal*, Sept. 29, 1917, p. 2; Eldridge Foster Dowell, *A History of Criminal Syndicalism Legislation in the United States* (Baltimore, 1939), 94–96, 139, 147–148; *Minnesota Reports*, 140:112–120 (St. Paul, 1918); Michigan, *Public Acts, 1919*, no. 255 (Ft. Wayne, Ind., 1919).

[17] Lloyd George Reynolds and Charles C. Killingsworth, *Trade Union Publications: The Official Journals, Convention Proceedings, and Constitutions of the International Unions and Federations, 1850–1941* (Baltimore, 1944), 1:163; Minnesota Bureau of Labor and Industrial Statistics, *Biennial Report, 1919–20*, 135, 146, 153–169; Vernon H. Jensen, *Lumber and Labor* (New York, 1945), 154–160, 204–206.

[18] U. S. National Recovery Administration, *Code of Fair Competition for the Lumber and Timber Products Industry, as Approved on August 19, 1933* (Washington, 1933), 5–6; Reynolds and Killingsworth, *Trade Union Publications*, 1:226; Florence Peterson, *Handbook of Labor Unions* (Washington, 1944), 410–411; Jensen, *Lumber and Labor*, 211–217.

[19] *Midwest Labor* (Duluth), Oct. 22, 1937, p. 1, Nov. 25, 1937, p. 1, Mar. 18, 1938, p. 6, 16; Timber Producers Association, *Bulletin*, Nov. 1, 1937, p. 1–2 (Duluth, mimeographed); *News-Tribune* (Duluth), Nov. 22, 1937, p. 1, 3; Jensen, *Lumber and Labor*, 201.

larly vicious during the summer of 1937. Lumber and Sawmill Workers Local No. 2530 of the A. F. of L. United Brotherhood of Carpenters and Joiners started an organization drive in March of that year. A strike commenced in May and spread to include several thousand workers throughout the Upper Peninsula. The strikers demanded wage increases, union recognition, and better camp conditions such as single beds, clean blankets, shower baths, and improved food. At Newberry a vigilance committee cooperated with foremen and local law enforcement officials in an attack on the strikers that resulted in the death of one striker, the destruction of the strike headquarters, and the ejection of the leaders from the community. Late in August the union decided to transfer to the C. I. O. and became Timber and Sawmill Workers Union Local No. 15 of the International Woodworkers of America. The strike was called off early in September after some small jobbers had signed union agreements, but there was no definite union victory and union activity was not particularly successful. The Newberry Lumber and Chemical Company was cited by the National Labor Relations Board for interfering with the right of its workers to organize and for organizing a company union.[20]

During World War II general prosperity brought higher wages, the lure of jobs in other industries, and continued labor strife to the forest products industries of the Great Lakes States. The labor-union picture was muddied by a jurisdictional squabble between the Lumber and Sawmill Workers Union and the International Woodworkers of America. The Minnesota workers were more successful than those in Michigan and Wisconsin in maintaining their organization. One of their young leaders, Ilmar Koivunen, served for a time as a vice president of the I. W. A. The I. W. A. continued strong in the postwar period and in 1946 claimed to represent three thousand workers in bargaining sessions at Duluth.[21]

The outstanding fact about organization for collective bargaining in the lumber industry of the Great Lakes States was its lack of effectiveness. Short-lived unions and sporadic strikes secured some gains in shorter hours, higher wages, more regular pay days, and improved working conditions, but these gains were often temporary. The gains that were made resulted more from the general trend of the national economy than from pressure by organized workers. Collective action had some effect, but, at least before the latter 1930s, it was not the primary factor in improving the lot of the lumber workers.

[20] *Timber Worker* (Duluth), May 21 to Aug. 6, 1937, *passim*; *Midwest Labor*, Sept. 3, 1937, p. 1; *Chicago Daily Tribune*, July 2, 1937, p. 5; U. S. National Labor Relations Board, *Decisions and Orders*, 17:795–812 (Washington, 1940); Jensen, *Lumber and Labor*, 196–200.

[21] Jensen, *Lumber and Labor*, 240, 269, 282–283.

## THE PERUVIAN GUANO GOSPEL IN THE OLD SOUTH

WEYMOUTH T. JORDAN

*Department of History, Florida State University, Tallahassee*

Many Southern farmers and planters of the late ante-bellum period were eagerly and untiringly interested in scientific agriculture.[1] In one phase of their activities, the use of fertilizers, they seem to have been particularly energetic; and of the many restoratives that they employed and publicized, Peruvian guano received the most attention.[2] It was puffed and discussed year in and year out in Southern agricultural journals in the 1840s

[1] A portion of this article was read, Dec. 2, 1949, at the annual meeting of the Florida Academy of Sciences. Research on this article was made possible through receipt of a southern grant-in-aid from the Social Science Research Council.

[2] Among the materials used as fertilizers in the South before the introduction of guano were animal manure, ashes, blood, bones, burnt clay, coal tar, chalk, charcoal, cotton seed, decomposed animal matter, dung, feathers, fish, gypsum, hair, hay, horn, leaves, liquid manures, lime, malt dust, marl, muck, night soil, peat ashes, poudrette, rags, salt, saltpeter, sawdust, seaweed, soot, straw, urate, urine, vegetable mould, weeds, and woody fiber. For references to these substances, see *American Farmer* (Baltimore), 6:337–339 (January 1825); *Farmer's Register* (Shellbanks,

and 1850s. Such attention, of course, does not prove irrefutably that guano was actually utilized widely, nor does it afford information on which to base precise conclusions as to the total amounts applied to land in particular localities or States. The extended and absorbing interest shown in the substance does supply indisputable evidence, however, that Southerners believed it to be valuable. Increased farm production, as reported by them individually, proved them to be correct. Fervent testimonials of farmers operating holdings of all sizes indicates the existence of a literal guano crusade. It is worthy of note also that Southerners were not alone in demonstrating enthusiasm for guano. Their attitude was very similar to that of many agriculturists in the Middle Atlantic and New England States, where there also existed a guano mania in some of the years from about 1845 to 1861.[3]

In the 1840s, at the time utilizable quantities of guano were introduced in the United States, the Southern farmer was anxious to adopt new methods of improving his practices. Having just gone through a period marked by panic, depression, and readjustment, he was ready to hail a palliative that might increase his production and perhaps allow him to turn a greater profit from his activities. Acclaim for Edmund Ruffin's earlier work with calcareous manures, as well as a general uplift in interest in scientific agriculture resulting from the work of numerous agricultural promoters, journals, societies, and fairs, also prepared the farmer mentally to experiment with a new fertilizer.[4] Acceptance of guano was particularly enhanced by the publicity which it received in Europe and America; and it is obvious that the article was the recipient of one of the leading promotional campaigns in United States history.

Pre-Civil War guano possesses more than a passing historical interest today, too. Once introduced in the United States and its benefits touted and accepted, there developed an overpowering urge among quacks and impostors,[5] and among reputable and honest manufacturers and scientists, to produce commercial fertilizers to replace guano. The Peruvian variety was analyzed, tested, and appraised on each side of the Atlantic.[6] In England a prize of £1,000 was offered by the Royal Agricultural Society for the discovery of an acceptable substitute, the main reason for this being a desire to break the monopoly that existed in the trade.[7] Dozens of fertilizers were put on the Amer-

Petersburg, Va.), 2:5–6, 80–81 (June, July 1834), 5:358, 376 (October 1837); *Southern Agriculturist* (Charleston, S. C.), 2:235 (May 1829), 3:218–219, 279, 391, 559 (April, May, July, October 1830), 10: 607–608 (November 1837), 12:578–579 (November 1839), ser. 2, 1:57–75 (February 1841); and *Southern Planter* (Richmond, Va.), 1:102–103 (June 1841).

[3] For references to attitudes of farmers toward guano in the Middle and New England States, see U. S. Patent Office, *Report, Agriculture*, 1847–1861, inclusive.

[4] Avery O. Craven, *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606–1860* (Urbana, Ill., 1926), *passim*. In this connection see Kathleen Bruce, "Virginian Agricultural Decline to 1860: A Fallacy," *Agricultural History*, 6:3–13 (January 1932). Important information on early Southern interests in scientific agriculture may also be found in James C. Bonner, "Advancing Trends in Southern Agriculture," in *ibid.*, 22:248–259 (October 1948), "Genesis of Agricultural Reform in the Cotton Belt," *Journal of Southern History*, 9:475–500 (November 1943), and "Profile of a Late Ante-Bellum Community," *American Historical Review*, 49:663–680 (July 1944); Avery O. Craven, "The Agricultural Reformers of the Ante-Bellum South," in *ibid.*, 33:302–315 (January 1928); and Arthur R. Hall, "Terracing in the Southern Piedmont," *Agricultural History*, 23:96–109 (April 1949).

[5] Discussions of numerous frauds and adulterations, as well as efforts to insure distribution and sale of genuine guano, are included in: *American Agriculturist* (New York), 10:36 (January 1851); *Country Gentleman* (Albany and New York), quoted in *Soil of the South* (Columbus, Ga.), 4:336 (November 1854); *Farmer's Journal* (Bath, Raleigh, N. C.), 2:242 (November 1853); *Hunt's Merchants' Magazine* (New York), 31: 232–233 (August 1854); *Tribune* (New York), quoted in *Southern Cultivator* (Augusta, Athens, Atlanta, Ga.), 15:111 (April 1857); *Soil of the South*, 1:56–57 (April 1851); *Southern Cultivator*, 2:51 (September 1844), 10:167 (June 1852); and *Southern Planter*, 10:43, 241 (February, August 1850), 11:36–37, 122–124 (February, April 1851).

[6] For analyses and tests of Peruvian guano, see *American Farmer*, quoted in *Southern Agriculturist*, ser. 2, 4:437 (November 1844); *Cultivator* (Albany), quoted in *Southern Cultivator*, 3:103 (July 1845); *Hunt's Merchants' Magazine*, 11:381–383 (October 1844); *Southern Agriculturist*, ser. 2, 3: 441–447 (December 1843); *Southern Cultivator*, 2:159 (October 1844); *Southern Planter*, 5:111 (May 1845), 14:269–270 (September 1854); and *Weekly Alabama Journal* (Montgomery), Apr. 10, 1852. See U. S. Patent Office, *Report, 1861, Agriculture*, 584, for analyses of 16 commercial fertilizers, including Peruvian guano.

[7] *Ibid.*, *1852, Agriculture*, 12; *Alabama Planter* (Mo-

can market in the 1840s and 1850s,[8] partially to oust guano from its commanding position. Some were quite effective, and they were cheaper than the natural kind from Peru. Furthermore, and of more lasting significance, as a result of advances in the field of soil chemistry it was possible to incorporate into manufactured fertilizers various qualities believed to be essential for cultivating more advantageously various types of soil. In the ante-bellum period these commercial fertilizers gave rise, to a large degree, to activities that have evolved directly into the present-day fertilizer business in the United States.

Sale and utilization of commercial fertilizers were also advanced as a result of the Civil War, for trade in imported articles were drastically interrupted during 1861–1865,[9] especially in the South which was blockaded. Shortly after the war, when Peruvian supplies were nearly depleted and it became more evident than formerly that a preference had developed for processed restoratives,[10] domestically manufactured products captured the fertilizer market.[11] Peruvian guano also fell off in quality at this time. In the course of these developments, just before and after the Civil War, in some respects at least, the modern fertilizer business had its beginnings. Guano had served a double purpose: it increased agricultural output, and more than any other substance it popularized the use of commercial fertilizers in the United States, in the South as elsewhere.

Knowledge of Peruvian guano and recognition of its capacities came to North America in a circuitous way, and through the columns of their agricultural journals Southerners were thoroughly indoctrinated even on this phase of the subject. They were informed that aborigines of Peru had begun using it on crops as early as the thirteenth century, and perhaps even earlier.[12] It had been considered so precious that the Incas had put to death persons who killed the birds that deposited dung along the lower coast of Peru and on the arid islands off that section of the country. The fertilizer was still cherished by the Indians when Peru was reached by Spanish conquerors in the sixteenth century. Moreover, in 1604 a writer named Acosta had lauded guano in his book *The Natural and Moral History of the East and West Indies*: "... this dung is so commodious and profitable, as it makes the earth yeeld great aboundance of fruite."[13] Baron Alexander von Humboldt, the famous German scientist and geographer who traveled widely in South America in the late 1790s, was pointed out as having taken the first sample to Europe.[14] The substance was dignified with a history all its own.

As far as is known, the first widely circulated American description of guano occurred in an article in John S. Skinner's *American Farmer* during the summer of 1824.[15] Shortly afterward Skinner was able personally to examine and probably to utilize a sample of the substance. He wrote: "With some curious articles and valuable seeds brought from the Pacific by Midshipman *Bland*, in the Franklin, he favoured us with a specimen of GUANO, ... that celebrated *Guano*

bile), 7:47 (Jan. 10, 1853); and *American Cotton Planter* (Montgomery, Ala.), 3:101 (April 1855).

[8] The *Southern Planter*, 8:129–132 (May 1848), lists the following so-called "Bought Manures": Guano; Potter's Guano; Nitrate of Soda; Nitrate of Potass; Petre Salt; Gypsum; Urate of the London Manure Company; Sulphate of Ammonia; Bone Dust and Half Inch Bones; Calcined Bones; Phosphate of Lime; Superphosphate of Lime; Phosphate of Ammonia; Muriate of Ammonia; Sulphate of Magnesia; Muriate of Lime; Soda Ash; Daniel's Bristol Manure; Clarke's Dessicated Compost; Watson's Compost; and Alexander's Compost.

In Georgia the following "Commercial Manures" were available in 1861: J. J. & F. Turner's Excelsior; Peruvian Guano; American Guano; Rhodes Superphosphate; Mapes' Nitrogenized Superphosphate; Reese's Manipulated; Elide Guano; Sombrero Guano; Trego Guano; Ruffin's Fertilizer; Sands' Land Plaster and Potash; American and Peruvian Guano; Kettlewell's Renovator; Elide and American Guano; Superphosphate; Mexican and One-third Peruvian Guano; Nothing on It; Sands' Excelsior; Rhodes Superphosphate and One-third Peruvian Guano; National Fertilizer; Rhodes' Superphosphate and American Guano; Elide and One-third Peruvian Guano; Hoyt's Superphosphate; Colombian and Peruvian Guano; and Robinson's Fertilizer. *Southern Cultivator*, 19:42–43 (February 1861).

[9] Rosser H. Taylor, "The Sale and Application of Commercial Fertilizers in the South Atlantic States to 1900," *Agricultural History*, 21:48 (January 1947).

[10] *Ibid.*, 21:46–52 (January 1947).

[11] *Ibid.*; U. S. Department of Agriculture, *Report, 1869*, 49, and *ibid., 1873*, 272.

[12] *Southern Cultivator*, 1:51 (August 1843).

[13] Quoted in *Southern Planter*, 12:197 (July 1852).

[14] *Ibid.*; *American Farmer*, 13:286 (November 1830).

[15] *American Farmer*, 6:146 (July 1824).

dung, possessing such astonishing fertilizing properties."[16] Although this statement is of historical importance and it seems to be a report of guano's introduction in the United States, it by no means marks the beginning of the fertilizer's sale and utilization in that country. The article was not shipped to the United States in any appreciable amounts until about twenty years later; and it was not until the 1850s that guano assumed major significance among American imports.[17] How it attracted wide-reaching notice in the United States is an interesting story in itself. Prospective consumers were kept posted on this phase of the subject, too.

In the 1820s and 1830s Peru was involved in a series of revolutions. Fighting wars and establishing new governments the country incurred heavy debts; and in 1839 it accepted large monetary advances from English bankers and investors. In return the latter shortly afterward received Peruvian government bonds, as collateral for which Peru assigned them a monopoly on its guano.[18] The Englishmen, of course, engaged to advertise and sell the guano, with the company of Anthony Gibbs and Sons (later Gibbs and Bright) of Liverpool being most actively involved in the trade.[19] It controlled sales and prices, whereas the tasks of digging, loading, and shipping were placed under the management of the Peruvian government. Peru was paid a few dollars for each ton shipped from its possessions, with its remuneration increasing each time its contract with the Gibbs firm was renewed.[20]

The government extended another monopoly to Don Domingo Elias, a leading Peruvian landholder, to work the deposits,[21] the most valuable of which were located on the Chincha Islands, about 20 miles off the southern coast. Pisco was the seaport closest to the islands. Interestingly enough, after gold was discovered in California, hundreds of Chinese laborers who boarded ships believing that they were being transported to the gold fields later found themselves confined in a manner worse than slavery on the guano islands. They, along with native convicts, were guarded at their tasks by Peruvian soldiers. It seems that here was a case of human exploitation at its very worst. Atrocity stories about work conditions in the guano fields, quite similar in content to some

[16] *Ibid.*, 6:316 (December 1824).

[17] *Hunt's Merchants' Magazine*, 41:645 (November 1859).

[18] The story of the methods of mining, distributing, and selling Peruvian guano is elaborate enough to stand as an independent study. Many of the details about the trade, as well as some American reactions to it, may be found in the *Amercian Agriculturist*, 12: 185 (May 1854); *American Cotton Planter*, 1:64 (February 1853), 3:219 (July 1855); *Carolina Cultivator* (Raleigh, N. C.), 2:117–118 (June 1856); *DeBow's Review* (New Orleans), 13:627–630 (December 1852), 16: 100 (January 1854); *Homestead* (Hartford, Conn.), 1: 441 (April 1856), 4:418 (March 1859); *Hunt's Merchants' Magazine*, 11:478 (November 1844), 34:118 (January 1856), 37:574 (November 1857); *Journal* (Boston), quoted in *Carolina Cultivator*, 2:369 (February 1857); *National Intelligencer* (Washington), quoted in *ibid.*, 2:143 (July 1856); *New England Farmer* (Boston), 11:544–545 (December 1859); *Niles' National Register* (Baltimore), 67:18 (September 1844); *Soil of the South*, 4:204–206 (July 1854); *Southern Cultivator*, 2:174 (October 1844), 10:74 (March 1852), 14:365 (December 1856); *Tribune* (New York), quoted in *Alabama Planter*, 8:233 (June 26, 1854); and *Virginia Sentinel* (Alexandria), quoted in *Southern Planter*, 15: 9–12 (January 1855).

[19] In the 1850s the United States attempted to break the monopoly on Peruvian guano, but failed. As explained by the American minister in Peru, the Peruvian government depended "entirely" on guano sales "to pay the interest upon the national debt," and "it is a delicate subject to touch upon." He added: "Under the present system of contracting with mercantile houses for the sale of guano, the government can obtain an advance of money at any time it may be required, without the trouble of negotiating a loan in the manner adopted by other nations. This is found to be very convenient, as the government applies to the consignees for the sum it needs, the agents furnish the money, and render a semi-annual account of their sales and advances to the treasury when they are not exposed to public scrutiny, as they would be in the United States." *DeBow's Review*, 16:461 (May 1854).

[20] According to *Memoria de los ramos de hacienda y comercio* (Lima, 1858), quoted in *Hunt's Merchants' Magazine*, 42:99 (January 1860): "From the year 1841, the commencement of the extraction of guano at the Chincha Islands, to the end of 1856, . . . the total quantity of guano amounted to 1,967,097 tons, of which there was sold 1,626,405 tons; 23,885 tons were damaged, and 316,789 tons still in market. The total amount of sales was $100,263,519.75. The expense of extracting and management amounted to $61,008,884.87½, the net product of sales [to Peru] being $39,254,637.81½." See also *Carolina Cultivator*, 2:369 (February 1856), and *DeBow's Review*, 19:220 (August 1855).

[21] *Tribune* (Mobile), quoted in *Soil of the South*, 6:85 (March 1856).

of the contemporary abolitionist accounts of mistreatment of Southern Negro slaves, were spread on the pages of Southern agricultural journals in the two decades before the Civil War. One significant difference is that the Chinese coolies on occasion committed suicide *en masse* in order to escape their enslavement.[22] Work conditions were not entirely unbearable, however. Included among the laborers were a few free Indians and even Englishmen, who were paid high wages.[23]

Gibbs and his associates seem to have maintained their monopoly on the guano trade throughout the ante-bellum period. They sublet contracts and regional monopolies to leading commercial houses on the continent and elsewhere. For example, Montaigne and Company handled sales in France and in its possessions;[24] the business was conducted by Muretta and Son in Spain; in China it was controlled by J. Levellair and Son; and in Mauritius by a company known as Fendall.[25] The cartel, as might be expected, maintained uniform prices. One leading American editor once concluded in this respect: "When they change the rates they seem to give the wink to each other! How natural!"[26]

As far as can be ascertained, most of the trade during the 1840s was confined to Europe, with England receiving and putting to use most of the fertilizer. It is worthy of special note that even during the early 1850s, when Peruvian guano was most popular in the United States, only about one-half of Peru's exports were landed at American ports.[27] Although it seems that steady shipments were begun to England in 1839, available reports indicate that only 2,000 tons reached there in 1841.[28] Receipts increased to 220,000 tons in 1845 and averaged about 90,000 tons annually for the next five years. From 1841 through 1852, a total of 1,258,107 tons (of 2,240 pounds) was shipped to England. During that period prices were maintained at from $30 to $50 per ton.[29] At one time in 1844, according to the Liverpool *Times*, between six and eight hundred British vessels put out "in search of this manure."[30] Obscure islands throughout the lower portions of the globe were sought with the hope of discovering new deposits. On one occasion, also in 1844, several hundred vessels were crowded around Ichaboe, a little island off the west coast of Africa. The island was "all taken up, and fully half taken away." It was believed that Ichaboe was "likely to disappear."[31]

In the early 1840s guano's usefulness was proved to the satisfaction of English farmers and scien-

[22] Specific descriptions of labor in the guano fields and of methods of loading ships may be found in the *American Agriculturist*, 12:84 (April 1854); *Farmer's Journal*, 1:304 (January 1853); *Niles' National Register*, 67:17 (Sept. 14, 1844); *Plough, the Loom, and the Anvil* (Philadelphia and New York), 10:69–76 (August 1857); *Picayune* (New Orleans), quoted in *Weekly Alabama Journal* (Montgomery), June 10, 1854; and *Traveller* (Boston), quoted in the *Southern Planter*, 15:20–21 (January 1855).

[23] See, for example, *Soil of the South*, 4:204–206 (July 1854).

[24] Montaigne and Company's contract was revoked and reverted to Gibbs in February 1858. *Hunt's Merchants' Magazine*, 42:99 (January 1860).

[25] *Ibid.*, 36:686 (June 1857); *Union* (Washington), quoted in *Genesee Farmer* (Rochester, N. Y.), 15:249 (August 1854).

[26] *Hunt's Merchants' Magazine*, 36:686 (June 1857).

[27] *Ibid.*, 40:483 (April 1859), 41:645 (November 1859), 43:741 (December 1860); *Alabama Planter*, 8:416 (Nov. 27, 1854); *DeBow's Review*, 26:583 (May 1859), 27:349 (Sept. 1859); *Southern Planter*, 17:341–342 (June 1857); and U. S. Patent Office, *Report, 1858, Agriculture*, 230.

[28] According to a committee report of July 31, 1854 in the United States Congress, "guano became an article of regular export to England in 1839, and to the United States in 1845; the quantities used in each being, at first quite small, but steadily increasing from year to year." *Virginia Sentinel* (Alexandria), quoted in *Southern Planter*, 15:9 (January 1855). Another source, of a less official nature, states: "GHUNO was first introduced into England in 1841,—twenty casks being brought to Liverpool by Mr. Meyers. Subsequently its use became so general that, for ten years ending in 1857, the English farmers expended more than *one hundred millions of dollars* in its purchase." *Genesee Farmer*, 21:43 (February 1860).

[29] *American Agriculturist*, 10:291 (September 1851); *DeBow's Review* 19:221 (August 1855).

[30] Quoted in *Niles' National Register*, 67:17 (Sept. 14, 1844).

[31] *Ibid.*, 67:256 (Dec. 21, 1844). For references to various guano explorations and discoveries, see *Alabama Planter*, 6:237 (June 26, 1852); *American Agriculturist*, 13:131 (November 1854); *American Farmer*, n.s., 8:17 (July 1852); *DeBow's Review*, 15:420 (October 1853); *Genesee Farmer*, 6:19 (February 1845); *Homestead*, 1:662–663 (July 1856); *Hunt's Merchants' Magazine*, 45:487 (November 1861); *New England Farmer*, 11:265–266 (June 1859); *Soil of the South*, 5:83 (March 1855); *Southern Cultivator*, 10:366 (December 1852); and *Southern Planter*, 16:143 (May 1856).

tists;[32] and its benefits were widely publicized in the United States, particularly in the South. Agricultural journals and other publications broadcast the guano gospel. *Niles' National Register* reported: "A great deal is said in the English papers about a new kind of manure called Ghano, brought from the Chincha islands in the Pacific ocean, and which, it appears, has the power of fertilizing the soil to a wonderful degree."[33] The *Southern Agriculturist* circulated a story that in England "this new manure" was "one of the most efficient yet known."[34] Editors, especially in the Eastern States, north and south, expatiated on English expeditions to the guano islands.[35] Southern journals filled their pages with glowing descriptions of guano experiments and hailed the dung's extraordinarily rapid vivifying powers.[36] Expansive accounts of English experiments were printed.[37] The *Southern Cultivator* agreed with other journals that guano had been found to be "among the most efficient manures. It has succeeded well, whether applied to grain, grasses, or to roots." With less foresight, however, the editor added: "There is no necessity of enlarging on this manure here, as it is not probable that it will ever be introduced to any extent into the United States, while we have so many easy accessible sources of fertility that have as yet hardly been touched, among us."[38] On the other hand, the *Southern Agriculturist* at about the same time reminded its readers that guano was being distributed in the British Isles, France, Germany, the West and East Indies, and Saint Helena. Americans "should not be so timid."[39]

Almost simultaneously, in the summer of 1843, a shipload of guano was received at Baltimore, where it sold at 7 cents per pound. C. T. Botts, editor of the *Southern Planter*, obtained a small quantity for experimental purposes. Afterward he concluded: "Much as we had heard of its marvelous effects we were astonished at the magical result upon our flower bed."[40] Other first-hand stories of its astonishing fertilizing properties were circulated and immediately became so broadly accepted that regular importations were begun at Baltimore and New York the following year. Boston and Philadelphia shortly entered the trade, too.[41] But guano was not to remain popular in the Northeast.[42]

At Baltimore, which remained consistently the leading Southern port of entry, imports of guano rose spectacularly from 445 tons in 1844 to over 25,000 in 1852.[43] Receipts reached their peak in 1854, when 175,849 tons were laid down in American ports; and in 1855 it was reported that "the present annual importation of guano into the

[32] Craven, *Soil Exhaustion as a Factor . . .*, 149; Lewis C. Gray, *History of Agriculture in the Southern United States to 1860* (Washington, 1933), 2:805.

[33] *Niles' National Register*, 62:224 (June 4, 1842).

[34] *Southern Agriculturist*, ser. 2, 2:584 (November 1842); see also *Southern Planter*, 2:124 (June 1842).

[35] *American Farmer*, quoted in *Southern Agriculturist*, ser. 2, 4:357 (September 1844); *Hunt's Merchants' Magazine*, 11:287–288, 478 (September, November 1844); *Niles' National Register*, 65:144 (Nov. 28, 1843), 68: 176 (Nov. 23, 1844); and *Southern Agriculturist*, ser. 2, 4:240 (June 1844).

[36] See, for example, *American Farmer*, quoted in *Southern Agriculturist*, ser. 2, 3:439 (November 1843); *Niles' National Register*, 63:341 (Jan. 28, 1843), 64:96 (Apr. 8, 1843); *Southern Cultivator*, 2:116, 174 (July, October 1844), 5:112 (May 1845); and *Southern Planter*, 4:130–131 (June 1844).

[37] The Albany *Cultivator* carried an account of one successful experiment reported to the Royal Agricultural Society. The *Cultivator*'s story was reprinted in the *American Farmer*; the latter was quoted in the *Southern Agriculturist*, ser. 2, 3:326–328 (September 1843).

[38] *Southern Cultivator*, 1:170 (October 1843).

[39] *Southern Agriculturist*, ser. 2, 3:293 (August 1843).

[40] *Southern Planter*, 2:196 (September 1843).

[41] *Hunt's Merchants' Magazine*, 34:430–441, 450 (April 1856). See also Craven, *Soil Exhaustion as a Factor . . .*, 149; and Gray, *History of Agriculture in the Southern United States to 1860*, 2:805.

[42] One farmer stated in the *Homestead*, 2:89 (October 1856), that guano "had the same effect upon the soil, that ardent spirits had upon the system. It greatly roused the energies for a time, but a reaction was sure to come." See also *New England Farmer*, 11:544–545 (December 1859); and *ibid.*, quoted in *Homestead*, 1:247 (January 1856). For other New England criticisms of guano, as well as indifference toward the substance, see U. S. Patent Office, *Report, 1848*, 349, 361; *1851, Agriculture*, 132, 140; *1852, Agriculture*, 116, 149, 160, 164; *1853, Agriculture*, 84, 89.

[43] *DeBow's Review*, 13:627–630 (December 1852), in an article on "History and Uses of Guano—Its Management and How Far Applicable to the South," states in part: "The first cargo imported into Baltimore—it being, I believe, the first in the United States —was in the year 1844. . . . From a single cargo in 1844, and but two or three in 1845, brought into the port of Baltimore, such has been the popularity of, and the growing demand for, this wonderful manure, that during the year 1851 . . . the import into the same port had run up to the large quantity of 25,000 tons, which was all sold at the high price of $46 to $48 per legal ton from the vessel."

United States amounts in value to about $10,000,000."[44] During the 1850s approximately 1,000,000 tons were shipped to the United States.[45] Substances similar to Chincha Island guano were introduced in the trade. Especially notable in this class were fertilizers from Colombia and Mexico,[46] and some of them undoubtedly were passed off as genuine Peruvian in origin.

In the United States, as in England, the Peruvian guano trade was completely monopolistic from beginning to end, with the Baltimore firm of Barreda and Brother serving as the American agent. The Barredas sublet contracts to dealers throughout the country, much as did the Gibbs firm throughout the world.[47] The Barredas were themselves at first merely the American representatives of Gibbs of Liverpool, but in 1852 they also advanced money to the Peruvian government. In these ways they maintained their monopoly in the United States. Prices were controlled in their interest and they, in cooperation with the Gibbs firm, pushed up costs intermittently from $45 the ton in the 1840s to slightly less than $70 just before the Civil War![48] Despite complaints of individuals,[49] agricultural societies, editors, conventions, and even the United States government,[50] and arguments that guano was not a satisfactory fertilizer, of which there were relatively few,[51] Southern farmers scrambled for it from the time of its introduction. Late in the decade of the 1850s, however, when prices were highest and commercial fertilizers were more numerous, interest in guano

[44] *Ibid.*, 19:219 (August 1855).

[45] *Hunt's Merchants' Magazine*, 34:450 (April 1856), 45:133 (August 1861); U. S. Patent Office, *Report, 1858, Agriculture*, 230. See also Craven, *Soil Exhaustion as a Factor . . .*, 148–150; and Gray, *History of Agriculture in the Southern United States to 1860*, 2:805–806.

[46] *Alabama Planter*, 8:401 (Nov. 20, 1854); *American Cotton Planter*, 2:369 (December 1854), 3:333 (November 1855); *American Farmer*, n.s., 6:62 (August 1850); and *Carolina Cultivator*, 2:143 (July 1856).

[47] For example, see a letter of May 16, 1855 by Barreda and Brother to the editors of the *Patriot* (Baltimore), quoted in *American Agriculturist*, 14:172 (May 1855). A despatch of Apr. 18, 1856, from J. Randolph Clay, U. S. Minister in Peru, to William L. Marcy, American Secretary of State, explaining the guano trade, is reprinted in *Hunt's Merchants' Magazine*, 35:106–107 (July 1856). There are also references to Barreda's monopoly in *American Agriculturist*, 14:165 (May 1855); *American Farmer*, n.s., 8:17, 32 (July 1852); *Journal* (Boston), quoted in *Carolina Cultivator*, 2:369 (February 1857); and *Southern Planter*, 13:307–308 (October 1853).

[48] Gray, *History of Agriculture in the Southern United States to 1860*, 2:806.

[49] *Alabama Planter*, 4:193 (May 20, 1850), 7:275 (July 25, 1853), 8:273 (July 31, 1854); *American Agriculturist*, 12:185 (May 1854); *American Cotton Planter*, 2:328–329 (November 1854); *American Farmer*, n.s., 6:38 (August 1850), 8:57 (August 1852); *Carolina Cultivator*, 2:117–118 (June 1856); *DeBow's Review*, 16:460 (May 1854), 18:33 (January 1855), 20:745–746 (June 1856); *Genesee Farmer*, 15:240 (August 1854); *Homestead*, 1:437–438 (April 1856); *Hunt's Merchants' Magazine*, 30:183 (February 1854), 34:118 (January 1856), 37:574 (November 1857); *New England Farmer*, 11:544–545 (December 1859); *Soil of the South*, 1:99 (July 1851), 4:295 (October 1854); *Southern Agriculturist*, ser. 2, 3:292 (August 1843); *Southern Cultivator* 2:174 (October 1844), 10:263 (September 1852), 18:255 (August 1859); *Southern Planter*, 4:131 (June 1844), 8:331–341 (November 1848), 10:218–219 (July 1850), 13:289–291 (October 1853), 16:244 (August 1856); *Tribune* (New York), quoted in *Alabama Planter*, 8:233 (June 26, 1854); and *Virginia Advocate* (Charlottesville), quoted in *Southern Planter*, 11:171 (June 1851).

On the basis of research conducted to date, the present writer has concluded tentatively that there were more complaints against guano in Virginia, in regard to price and capacities, than in any other State. Perhaps this resulted from its wider utilization in Virginia than elsewhere.

[50] President Millard Fillmore especially tried to break the monopoly. In his opening message to Congress in December 1850, he stated that "Peruvian guano has become so desirable an article to the agricultural interest of the U. States, that it is the duty of the Government to employ all the means properly in its power for the purpose of causing that article to be imported into the country at a reasonable price. Nothing will be omitted on my part towards accomplishing this desirable end." *American Farmer*, 6:238 (January 1851).

[51] Chief complaints against guano, aside from its price, were: it burned up the soil; applications had to be made annually; it was not as effective as stable manure or homemade compost; often the purchased article was adulterated; and it did not bring uniform results. For criticisms of guano, see *American Cotton Planter and Soil of the South* (Montgomery, Ala.), 2:143–144 (May 1858); *American Farmer*, quoted in *Southern Cultivator*, 5:98 (July 1847); *American Quarterly Journal of Agriculture and Science* (Albany, N. Y.), 3:87–88 (January 1846); *Carolina Cultivator*, 2:17 (March 1856); *Homestead*, 2:89 (October 1856); *Soil of the South*, 4:34–35 (February 1854), 5:110–111 (April 1855); and *Southern Planter*, 6:43 (February 1846), 7:375 (December 1847), 9:167 (June 1849), 11:94 (March 1851).

tapered off,[52] although by no means did it disappear. If prices had not been advanced so greedily, guano likely would have more nearly held its sway. In the heyday of the mania one Virginian, unquestionably expressing the thoughts of many of his contemporaries, hoped that guano could be taken out "of the hands of speculators and their agents. . . ." He plaintively added, "never has a class in any community suffered so much as the farmer by speculators; his lands, his crops, and finally his manure is now under their controlling influence. . . ."[53]

The modern American scholar who is most widely known for research on the subject of Peruvian guano, after studying the fertilizer in regard to its significance in Virginia and Maryland, has remarked:

> In spite of the government monopoly which Peru maintained, and the consignment system by which all importations were made—both causing the price to remain high—guano increased in importance during the fifties and only on rare occasions did the supply equal the demand. So basic in the new agriculture did it become that the [Virginia and Maryland] state governments provided for its inspection and, urged on by conventions and individual petitions, passed resolutions demanding action on the part of the central government in making better terms with Peru.[54]

This pioneer conclusion on the matter is correct, of course, and it deservedly has held a significant place in the interpretation of Southern agricultural history. Unfortunately, and perhaps mainly because of the proximity of Baltimore as the leading guano port, it seems that a general opinion has developed that guano and an interest in scientific farming which it helped enhance were confined to the Upper South. Such an interpretation has been misleading, and it could not have been the intent of the above mentioned author. Overlooked rather generally, in the specific matter of use of fertilizers, is the fact that guano was appreciated elsewhere than Virginia and Maryland. Little more than fugitive remarks on the subject have found their way into general historical studies. If interest in the Peruvian guano trade is a worthwhile clue, however, its application rather generally throughout the South in the 1850s is another strong evidence that numerous Southern farmers and planters sought to institute better farming procedures. That they desired and attempted both to improve their methods and utility of their land resources is shown by their confidence and hopes regarding the fertilizer. They submitted hundreds, and probably thousands, of favorable testimonials about it to their agricultural journals.[55]

Virginia and Maryland turned early to the utilization of guano, perhaps mainly because of the activities and convenient location of Barreda and Brother.[56] In North Carolina the fertilizer was widely used.[57] Trade became particularly noticeable in Charleston and Savannah in the late 1850s.[58] Small quantities, for experimental purposes, were introduced in Alabama in the early 1840s.[59] Ten years later New Orleans and Mobile had become leading points of distribution in the Gulf of Mexico States. Montgomery, Alabama, also served as a depot.[60] Missis-

[52] See, for example, the U. S. Patent Office, *Report, Agriculture*, for each year in the late 1850s.

[53] *Farmer's Journal*, 1:167 (September 1852).

[54] Craven, *Soil Exhaustion as a Factor . . .*, 149–150.

[55] It will have been noticed that this article is based primarily on an examination of Southern agricultural journals. When the writer's more complete study is finished, it will be based on periodicals and other available materials.

[56] In Virginia the chief points of distribution became Norfolk, Richmond, Alexandria, Fredericksburg, and Petersburg. Shipments by rail were also being made to Charlottesville in 1850. *Advocate* (Charlottesville), quoted in *Alabama Planter*, 4:321 (Dec. 9, 1850); *Beacon* (Norfolk), quoted in *Farmer's Journal*, 1:388 (March 1853); and *Southern Planter*, 12:310–311 (October 1852).

[57] *Farmer's Journal*, 2:117, 178, 375–376 (July, September 1853, March 1854).

[58] The *Southern Cultivator*, 17:56 (February 1859), states: "Guano. We saw, yesterday, says the Savannah *Republican* . . . , a large lot of this article landing from the schr. Virginia, and we understand that there are 172,000 lbs. now in port destined for the interior. . . . We are pleased to see this active movement, as it presages a resuscitation of the soil of our beloved old State. . . ." See also *American Cotton Planter and Soil of the South*, 1:183 (June 1857), 2:374 (December 1858); *Hunt's Merchants' Magazine*, 34:450 (April 1856); and *Southern Cultivator*, 17:56 (February 1859).

[59] Noah B. Cloud, of Macon County, Alabama, the outstanding agricultural reformer in his State before the Civil War, obtained guano as early as 1843. Afterward he consistently praised it, although he believed that it was no better than compost for farm purposes. *Alabama Planter*, 4:113 (Mar. 13, 1852); *American Cotton Planter and Soil of the South*, 3:336–337 (November 1859); and *Weekly Alabama Journal* (Montgomery), Apr. 10, 1852.

[60] *Alabama Planter*, 5:73 (Feb. 10, 1851); *American*

sippians and Tennesseans presumably obtained their supplies through the Crescent City. Only small amounts ever reached the upper Mississippi Valley because of excessive transportation costs, nor is any record available of its widespread introduction into the trans-Mississippi West in the region north of Arkansas.[61] Conversely, most guano must have been employed in areas not too far distant from the coast. It is an indisputable fact that it was an article of commerce and agriculture in at least ten Southern States in the period before the Civil War.

Newspaper and agricultural journal editors were fond of lauding Peruvian guano. In their zeal they developed a mania for it. A few additional contemporary references to its popularity will further clarify the point that it was widely commended.[62] The Richmond *Times* in the summer of 1850 claimed that it was "producing a wonderful revolution upon the poor lands in middle and lower Virginia. Lands which formerly produced from 3 to 5 bushels of wheat per acre, now promise to give 20 to 25 bushels. Upon corn, tobacco, and many other articles, its effects are equally wonderful."[63] Another Virginia editor wrote: "The popularity of this comparatively new fertilizer, is increasing at a rapid rate. Its virtues are the theme of praise [even] among the cautious. Large quantities have been sold in Richmond, Petersburg, Norfolk, and other cities; and yet larger forwarded direct from Baltimore. The price has advanced in consequence of the demand."[64]

A Boston editor also took note of the fertilizer's significance to the Middle States and the South: "The introduction of guano into Maryland and the tide-water region of the lower States," he said, "has produced effects which enable it to rank as an era in their domestic and agricultural history. . . . All branches of industry have been stimulated to new life and activity."[65] Wheat output was especially enlarged in the Upper South: "Wagons laden with the increased products of the grain fields, blocked the streets of market towns. Millers and forwarders were overwhelmed with business, and the banks drained to pay for wheat. These things are cheering, but the end is not yet."[66] A New Yorker reported that guano was employed in "large quantities . . . in Delaware, New Jersey, Maryland, and Eastern Virginia, and generally with satisfactory results."[67] A North Carolina editor remarked in 1853 that "thousands of pounds are still sent into our State. . . . There are many rich fields in many parts of the country, which but for guano would have still been barren, failing to produce enough to pay the owner for their cultivation."[68]

In the Lower South the *Alabama Planter* concluded: "We have long been of the opinion that for the light and sandy soils of South Alabama, particularly for those about Mobile, no manure was so cheap and efficacious as Peruvian Guano." It could be obtained in Mobile from the firm of P. B. Pomeroy.[69] Daniel Lee, in his *Southern Cultivator*, after putting some of the fertilizer on his corn, stated: "The effect of the guano is discernable half a mile."[70] James M. Chambers, editor of the Columbus, Georgia, *Soil of the South*, found that the substance doubled his corn produc-

*Cotton Planter and Soil of the South*, 2:374 (December 1858); *Hunt's Merchants' Magazine*, 34:450 (April 1856); *Soil of the South*, 3:735 (November 1853), 5:192 (June 1855); and *Southern Cultivator*, 14:327 (October 1856). Castillo and Harispe were official agents for Peruvian guano sales in New Orleans. *Alabama Planter*, 7:57 (Jan. 24, 1853); and *Picayune* (New Orleans), quoted in *Southern Cultivator*, 12:94 (March 1854).

[61] This statement is based on an examination of U. S. Patent Office, *Report, Agriculture*, for 1847–1861, inclusive.

[62] In 1853, James Higgins, State agricultural chemist, made the following statement in his report to the Maryland House of Delegates: "There is no manure which has so suddenly gained for itself extended use and high favor, as guano; none which costs more money; none which differs more in its composition and use ulness; and none which should be more strictly examined before being bought. The other manures in common use have been hundreds, some of them thousands of years in gaining the confidence of the public. This, in our country, has leaped suddenly into use, having never known the toils of youth nor the helplessness of infancy." *Farmer's Journal*, 2:321 (February 1854).

[63] *Times* (Richmond, Va.), quoted in *Alabama Planter*, 4:245 (July 1, 1850.)

[64] *Southern Planter*, 10:118 (April 1850).

[65] *New England Farmer*, 9:67–68 (February 1857).

[66] *Ibid.*

[67] *Genesee Farmer*, 11:211 (September 1850).

[68] *Farmer's Journal*, 2:178 (September 1853).

[69] *Alabama Planter*, 5:73 (Feb. 10, 1851).

[70] *Southern Cultivator*, 10:291–292 (October 1852). Lee's early reasons for favoring guano as a fertilizer are presented in U. S. Patent Office, *Report, 1850, Agriculture*, 41, 58, 63. In 1859 Lee urged that guano not be employed excessively on the same plot of land. *Southern Cultivator*, 17:75 (March 1859).

tion.[71] The fertilizer received an added boost from *Hunt's Merchants' Magazine*, of New York City, when that leading commercial publication in pre-Civil War America stated in 1857 that it was being shipped from Peru in vessels flying the flags of sixteen countries.[72]

Reports of guano's salutary effects in some of the Northern States must also have tended to enhance its prestige in the South. A Boston horticulturist preferred it to stable manure, "even if the latter costs twice that of guano."[73] A Rhode Islander, after conducting several experiments, concluded: "They all confirm the great reputation of Peruvian guano. The value of this substance compared with other fertilizers cannot be determined, but it may be considered the cheapest in use."[74] A New Jersey farmer in 1852 was satisfied that it was "superior to any other manure at the same cost."[75] In some cases New Yorkers and Pennsylvanians doubled crop production with the fertilizer.[76] The principal of the Mount Airy Agricultural Institute, Germantown, Pennsylvania, wrote in 1853: "Plants, like animals, require a certain amount of food every day throughout their lives." He therefore spread guano about his plants three or four times during their growing season.[77] Thomas Ewbank, speaking in 1852 in his official capacity as United States Commissioner of Patents, concluded as follows in regard to guano: "The beneficial effects it produces have excited attention to its values throughout the country; and the portable manner in which it is prepared, with the facilities of its transportation, lead us to hope that for the time to come its consumption will be greatly increased. . . ."[78]

Individual farmers in the South, realizing that they needed a soil renovator, were eager to extol guano's virtues. A Marylander stated in *DeBow's Review* that the fertilizer had brought excellent results on corn, rye, oats, buckwheat, potatoes, and garden vegetables.[79] Glowing reports were circulated from Mississippi, where one farmer expounded in 1854 that "the introduction of this valuable manure into our country, and particularly into this poor piney woods land, has produced a wondrous change in its products." It was profitable on fruits, vegetables, rice, grasses, sweet potatoes, corn, peas, and every article that he cultivated.[80] It acted "like magic" on worn-out cotton lands in the Alabama black-belt.[81] For one farmer in Louisiana guano brought an increase of 50 percent in sugar output.[82] A Georgian went all out for its use: "The fact need no longer be blinked, that if ever our lands, in this cotton region, are to be restored, *foreign manures*, portable and easily applied, must be the basis of our improvement; and the sooner we set about applying them, the

[71] *Soil of the South*, 2:401–402 (January 1853).

[72] In 1857, Peruvian guano was being shipped especially in vessels flying British and United States flags. Other ships were French, Swedish, Hanse Towns, Belgian, Sardinian, Danish, Mecklenburg, Peruvian, Norwegian, Prussian, Russian, Oldenburgh, Chilian, and Hanoverian. *Memoria de los ramos de hacienda y comercio* (Lima, 1858), translated and quoted in *Hunt's Merchants' Magazine*, 42:99 (January 1860).

[73] *Southern Cultivator*, 10:341 (November 1852).

[74] *New England Farmer*, quoted in *South rn Planter*, 11:247 (August 1851).

[75] *American Cotton Planter*, 1:48–49 (February 1853).

[76] *American Agriculturist*, 12:357 (August 1854), 13:147 (November 1854).

[77] *Southern Planter*, 13:40–42 (February 1853).

[78] U. S. Patent Office, *Report, 1851, Agriculture*, 2.

[79] *DeBow's Review*, 13:628 (December 1852). One Marylander stated that guano was sought almost with the same fervor as gold. U. S. Patent Office, *Report, 1848*, 469. A Virginian reported to the Patent Office that guano was creating an agricultural revolution in his State by reviving "thousands on thousands of acres. . . ." *Ibid.*, *1851, Agriculture*, 274. A North Carolinian found guano on buckwheat, wheat, and clover to be "as enduring as other manures, and does not expend itself in one season, as has been heretofore supposed." *Ibid.*, *1853, Agriculture*, 93.

[80] *Ibid.*, *1849, Agriculture*, 164; *American Cotton Planter*, 1:53 (February 1853); and *Picayune* (New Orleans), quoted in *Southern Cultivator*, 13:94 (March 1854).

[81] *Weekly Alabama Journal* (Montgomery), Jan. 8, 1853. "Good success" was had with guano in Tennessee, according to one farmer. U. S. Patent Office, *Report, 1851, Agriculture*, 351–353. For descriptions of excellent results with guano in Mississippi, see *American Cotton Planter and Soil of the South*, 2:229 (July 1858); and *Picayune* (New Orleans), quoted in *Southern Cultivator*, 12:94 (March 1854).

[82] *Ibid.*, 12:122 (April 1854). For other accounts of guano's beneficial results on sugar production, see *American Cotton Planter*, 3:116 (April 1855), and *DeBow's Review*, 17:213–214 (August 1854). The *Southern Cultivator*, 12:94 (March 1854), states: "We understand that two cargoes of this [Peruvian] guano have arrived at New Orleans, and that more will be coming, so as to keep a regular supply. Large quantities have already been purchased there for upland cotton fields in Alabama, and the sugar planters in Louisiana are beginning to try this fertilizer."

better for us and ours."[83] In his State in the 1850s, as is well-known, the Central of Georgia Railroad was transporting guano to the interior "at a price just sufficient to defray expenses."[84]

Guano was presented as affecting objects other than plants. One tall tale of its powers concerns a farm boy who fell asleep on some bags of guano stored in a barn. When he came out of the barn he was "a giant eight feet tall!"[85] Of all the stories boosting the strength of guano, however, the most amazing one originated with an old New England sailor who had served aboard ships in the guano trade. Once on a return trip from Peru, his ship ran into a heavy squall. Rain fell into the open hatches and, according to the narrator, "produced the most surprising effects:"

> The timbers of the vessel sprouted and grew in all directions. Between decks was a complete bowery. The forecastle became an almost impenetrable thicket, and the cabin a beautiful arbor. The rudder post being made of white oak, grew up into a 'live oak' tree, which afforded a grateful shade to the man at the helm, though he was sometimes annoyed by the acorns rattling upon his tarpaulin hat. The masts became very imposing with their evergreen foliage, and strange to relate, the foretopmast, which had been carried away in the gale, grew out again, and the altitude of all masts was so much increased as to render the brig exceedingly crank.... They were obliged to prune the bowsprit and some of the spars twice a week. The quarter deck was covered with shrubbery, and the cook's caboose resembled a rustic summerhouse. Crab apples grew on the pump handle, and a cherry table in the cabin bore fruit....[86]

[83] *Ibid.*, 11:73 (March 1853).

[84] *Ibid.*, 18:56 (February 1858). Freight rates on fertilizers were also cut in half by the Baltimore and Ohio Railroad on Apr. 1, 1850. *American Farmer*, 6:26 (July 1850).

[85] *Daily Alabama Journal* (Montgomery), Apr. 9, 1853.

[86] *Herald* (Boston), quoted in *Southern Cultivator*, 15:163 (May 1857).

# PEHR KALM'S DESCRIPTION OF THE NORTH AMERICAN MULBERRY TREE

*Translated and edited by* ESTHER LOUISE LARSEN

In North America two kinds of mulberry trees are found growing wild,[1] namely the red or so-called black mulberry tree which is entirely different from the European black mulberry and which will be properly discussed below; and the white mulberry tree (*Morus alba*).[2]

I have never found this [last] one growing wild during my travels. I have only seen it here and there on farms where the owners said it had first come from Europe. However, Mr. John Bartram who has traveled much in the English provinces assured me that he had found this white mulberry tree growing wild in the forests in a few places. Father [François Xavier de] Charlevoix says explicitly in his *Journal historique d'un voyage de l'Amér[ica]*, 6: 140, that it grows in quantities in Louisiana. [John] Lawson, in his [*The*] *History of Carolina*, p. 103, says that a species of mulberry is found in Carolina that has smooth leaves and berries which are in part white and in part black. Near New York I found a mulberry tree in the forest which had *folia cordata glabra seu laevia*, but the berries were not ripe. It is possible that this is the same as the Carolina smooth-leaved one.

But I return to the red mulberry tree. The particular names, which it has received from plant specialists, follow: Morus (rubra) foliis cordatis subtus villosis amentis cylindricis. Linn[aeus], *Spec[ies] Plant[arum* (ed. 2, 1763)], p. 1399. Morus foliis subtus tomentosis amentis longis dioicis. [Johannes Fredericus] Gron[ovius, *Flora*] *Vir-[ginica* (1762)], p. 146. Morus Virginiana. Raj. *Hist[oria Plantorum* (Londini, 1686–1704)], 430. Morus Virginiensis, arbor, Loti arboris instar

[1] The article by Pehr Kalm which is here translated and edited by Mrs. Esther Larsen Doak of Rural Route No. 4, Crown Point, Indiana, appeared under the title, "Beskrifning på Norr-Americanske Mulbärsträdet, Morus rubra Kalladt," in the Kongl. Svenska Vetenskaps Academien, *Handlingar*, 37: 143–163 (1776).

For other articles by Kalm which have been translated and edited by Mrs. Doak, see *Agricultural History*, 9: 98–117 (1935), 13: 33–64, 149–156 (1939), 16: 149–157 (1942), 17: 172–174 (1943), 19: 58–64, 254–255 (1945), 21: 75–78 (1947), and 22: 142–143 (1948).—*Editor.*

[2] *Morus rubra* L. is the only native mulberry in eastern North America. *Morus alba* L. was introduced from Europe.

ramosa, foliis amplissimis. [Leonard] Pluk[enet], *Alm[agestum botonicum, sive Phytographiae Plukenetianae* (1769), 2:] 253, t[afel] 246, f[igure] 4.

The Swedes living in America call it *mulbärsträd*. The English commonly call it the *mulberry tree* and occasionally the *black mulberry tree*, the French in Canada *meurier* and *mûrier*, the Germans *Maulbeerbaum*, and the Dutch in the province of New York *Moerbesie-boom*.

*Habitat.* It grows in quantities in the forests of Carolina, Virginia, Maryland, Pennsylvania, and the southern part of New Jersey as well as farther up and inland in those regions with the same latitudes as the provinces just named. In the northern part of New Jersey as well as in the province of New York, it is less common, and in the northernmost part of these two provinces it is no longer found growing wild. It is still to be found in the forests near Albany, but 20 miles farther north the farmer, with whom I lodged, said that there are only a few scattered in the forests of that area. At Saratoga, which lies about 40 English miles north of Albany, the farmers insisted that they had never found mulberry trees in the forests. On the other hand, Colonel Lydius, who lived for a time at Fort Saratoga, and often amused himself by hunting in the neighborhood, assured me that he had seen an occasional mulberry tree. The colonel had also lived at old Fort Nicolson, 12 English miles north of Saratoga, for several years and had traveled in the forest every day but had never discovered this tree. Saratoga lies at latitude 43° 25″. The winters there are always as cold as in Sweden although not so long. On the entire trip from Albany to Fort Oswego I did not see a single mulberry tree in the forest after I left the vicinity of Albany. At Oswego I saw only two, but between Oswego and Niagara they are a little more frequent, and at Niagara they are very common. At the locality last named a variety of this tree was found which might almost be taken for a different species, since some of the leaves were cordate, but most of them were either trilobate or palmate. Although the so-called Blue Mountains are very high and cold,[3] these trees even grow on them but much less abundantly.

*Soil.* They grow in various kinds of soil. They are abundant in the forest where there is a rich black mold. In several places I saw them growing in almost pure coarse sand, and they seemed to be doing fairly well. Scarcely any tree can be found which thrives as well on dry poor soil as this one. Several places I have seen them growing luxuriously and full of big berries, although they stood on the hardest and poorest ground where the grass around them was mostly burned up because of the severe drought, and I marveled that they could do so well. They had been planted there by birds who had eaten the berries. At Montreal in Canada the governor had had some of these trees planted. They stood on rather steep poor soil but had large flourishing leaves and were thriving. Their usual habitat is high dry land, but they are occasionally found growing in swamps, particularly in the so-called cedar swamps where *Cupressus thyoides* grows,[4] and they do fairly well even there.

Farmers in Pennsylvania cut these trees down as they are the worst weeds in the fields, for the birds spread their seeds in the loose soil where they come up thickly. If they are allowed to stand for a short time and form roots, they can not be eradicated unless they are pulled out completely, for if the trunk is cut off at the ground a number of shoots arise from the root which must later be pulled out by the farmer. If land is burned over or forest cleared away and the ground broken up, this tree is one of the first to appear from seeds which birds have carried there. An abundance of these trees is seen in yards and along trails in Pennsylvania and New Jersey. In most of the yards they had been carefully planted. Farther north in the province of New York they became rare along the trails.

It seems to be the type of tree which prefers to grow in vicinities where people live, for it is found in abundance around yards as well as in cleared places but not in the forests. I often observed that the mulberry trees which grew in dense forests generally did not fruit, or if they had any fruit it consisted of only a few berries. In contrast, if they stood on the outer edge of the forest, close to a lake, or in an open field where they were exposed to sun and air, they were usually full of berries during the summer. I found this to be true for a large number of trees.

[3] Apparently Kalm used the term "Blue Mountains" for all the mountains in the eastern part of the present United States. "These mountains which the English call the Blue Mountains, are of considerable height and extend in one continuous chain from north to south, or from Canada to Carolina." A. B. Benson, ed., *The America of 1750; Peter Kalm's Travels in North America* (New York, 1937), 1: 65.

[4] *Chamaecyporis thyoides* (L.) BSP.

[*Characteristics.*] According to the characteristics used by Archiater and Knight von Linné in botanical classification, these mulberry trees should belong to the class called Polygamia, for on most of these trees some of flowers are male (mares) and on some female (foeminae). On some of them all the flowers are male and never bear fruit. I have seen a tree which produced only male flowers on its upper branches and female flowers on the lower ones. The flowers on one solitary branch were all male, and no matter how carefully I searched I could not find a single female flower. The owner of the tree affirmed that he had never seen any berries on that branch although it was an old tree which had borne fruit for many years. Some flowers are found which contain both stamens and pistils and are hermaphroditic, but on the same tree some flowers are found which are only staminate and others which are only pistilate. I saw this on several journeys. Mr. Bartram assured me that he had a mulberry tree in his yard which had produced only female flowers on all years previous to 1750, but that spring it had a quantity of male flowers. I am afraid that he was mistaken. It is possible that in the previous years he had not made the careful observations of these matters that would be necessary for a satisfactory explanation of so new and unusual a case. People in the locality knew enough to distinguish between the males and females of these trees; for those which bore fruit, whether they were ***androgynae*** or ***faeminae***, were called female mulberry trees, but those which never bore fruit received the name of male mulberry trees.

Now I will describe the flowers of the mulberry tree which is ***androgynae***, that is, the one on which one flower is a male flower and the other is a female. I will for the most part use Latin words which are usually used in describing flowers.

Masculi Flores in racemum conferti. Calyx: Perianthium quadripartitum, foliolis lanceolato-ovatis, concavis, filamenti pluriman partem singulum amplexans, patenti-erectis, viridibus. Corolla nulla. Stamina: Filamenta quatuor, subulata, erecta, calyce longiora, intra singulum folium calycinum singula: antherae simplices. Pistillum: Protuberantia, obtusa, emarginata seu subbifida in medio floris.

Faeminini Flores congesti in eadem Planta cum Masculinis. Calyx: Perianthium tetraphyllum, foliolis subrotundis, obtusis, persistentibus, erectis, oppositis, exterioribus incumbentibus alternatim reliquis.

Occasionally there is a raceme in which most of the flowers are female. Male flowers are present also although there are usually only a few, 2, 3, 4, or 5, and they are placed a little from *pedunculum*, *propter*, *sponsal*, *plantar*, and *foecundat*. Since the racemes are pendant, the male flowers are so placed above the female flowers that the pollen from the male flowers must fall on the female flowers. Now and then some of the female flowers have three styles. When the anthers are moved, they produce a great deal of pollen.

Description of the male flowers of the mulberry tree. Masculini Flores in racemum cylindraceum conferti. Calyx: Perianthium quadripartitum, foliolis lanceolato-ovatis, concavis, acutis, patenti-erectis, externe rubescentibus, fere glabris, majorem filamentorum partem amplexantibus. Corolla nulla. Stamina: Filamenta quatuor, subulata, patenti-erecta, calyce aliquantulum seu fere duplo longiora, intra singulum folium calycinum singula, albescentia. Antherae simplices, albescentes. Pistilli loco punctum elevatum, acutum, 1/3 lin. Geom. longit.

Some *foliola calycina* are dark green outside. The outer side of the calyx is slightly pubescent, but it is so fine that it can scarcely be seen. The ament is 1½ to 2 inches long. These aments are usually produced *ad alas foliorum* on the shoots of the same year.

Description of the female flowers of the mulberry tree. Faeminini Flores in amentum parvum, oblongum, subcompressum congesti. Calyx: Perianthium tetraphyllum, foliolis ovatis, profunde concavis, obtusis, viridibus, oppositis duobus exterioribus incumbentibus alternatim reliquis. Corolla nulla. Stamina nulla. Pistillum: Germen cordatum, pallide viride, glaberrimum, longitudine calycis. Styli duo subulati, calyce fere duplo longiores, tantillum reflexi, superne albescentes, inferne linea longitudinali fusca. Stigmata simplicia. Observ. amenta 3½ ad 4. lin. Geom. longitinsidentia pedunculis teretibus subpubescentibus. Folia Mori rubrae cordata, crenato-ferrata, acuta seu in acumen fere desinentia, superne rugosa, glabra, obscure viridia, inferne leviter tomentosa, pallide viridia, nervis fere omnibus valde elevatis & fere totis supra superficien partis inferioris folii positis. Petioli teretes, laeves, pallide virides, vix subpubescentes, 3 f. 4. lin. Geom. longit.

These mulberry trees grow to considerable size and form a beautiful crown. The trunk is as straight and thick as that of alder and is said to reach a

diameter of 6 *qvarter*.[5] The bark is usually full of cracks in which insects, particularly the firefly, stay during the day.

In order to show how fast this tree grows I mention one whose trunk showed 18 annual rings at the thickest end when cut down. The diameter was 1 *qvarter* and 3 inches. The full height of this tree was 11 *alnar*.[6]

The leaves begin to come out about the first of May in Pennsylvania and New Jersey. The flowers begin to bloom about the sixth of May and are in full bloom by the middle of the month. In this locality the mulberry is one of the slowest trees to produce leaves.

In contrast, there is not a tree in that region which produces fruit as early. Some of its berries were already ripe by June 10, 1750. Farther north the berries ripen later. Between New York and Albany, on July 10 of the same year, a large part of the berries were not yet ripe and by July 19 many of the berries had fallen but most of them were left and some were not dead ripe.

Mulberry trees are among the first to lose their leaves in the autumn. In Pennsylvania they had already lost their leaves and were completely bare by October 22, 1750. In contrast, most of the other trees still retained their leaves, the leaves on many of them still being entirely green.

Mulberry trees are chiefly propagated by birds who have eaten the berries. Many small ones come up from berries which have fallen in the neighborhood of some other mulberry tree.

When cold winters occur in Pennsylvania, New Jersey, and New York, seedlings of the previous summer usually freeze to the ground. The reason for this is that the mulberry seedlings during the first summer's growth, particularly if the soil is fairly rich, produce rather long luxuriant shoots which reach 2, 3, or 4 *alnar* in length. In such a seedling the pith is large, spongy, and full of sap and so is the wood. The shoot can not stand much cold, but the root remains uninjured, and the next spring it sends up one or more shoots which are less rank and consequently more hardy for winter. By the time mulberry seedlings are 3 years old it takes an unusually hard winter in this country to injure them. At Montreal, Canada, I saw proof of the fact that mulberry trees can stand severe cold, particularly if they are planted in poor dry places so they do not make too much growth. Mulberry trees do not grow wild farther north in Canada, and no one seems disposed to introduce them. But the governor in that place had had some small mulberry seedlings brought from the southern part of Canada and had them planted on poor dry soil. They had been growing there for 20 years and seemed to be doing fairly well. They showed no sign of winter injury although the winters at Montreal are as severe as any we ever have in Sweden. There is said to have been an example of a large mulberry tree which was killed during an unusually cold winter in Pennsylvania, but it grew in quite rich soil and had produced many luxuriant shoots.

[*Uses.*] Now I will say something about the uses of this tree. It produces a large quantity of berries, especially when it grows in yards, along paths, or in open fields. Scarcely any tree can be mentioned which produces more fruit; the tree often appears entirely black because of it. If the tree stands in an enclosure so the berries are undisturbed where they fall, the ground under the tree becomes completely black and occasionally covered with berries to a depth of 1, 2, or 3 fingers breadth. Moreover it has this advantage; the berries do not all ripen at the same time, but some of them are ripe and black (which is the dead ripe color), others are half ripe and red, and still others are green. It usually takes nearly a month for all the berries to ripen, so there is the satisfaction of having new fresh fruit in quantities daily for a long time. These berries are as delicious as any one could hope to eat, and in addition they are extremely juicy. The berries are from ¾ to 1¼ inches in length. They are of a sweet-sour flavor but are much more sweet than sour. They have this additional advantage, namely, one can eat as many of these berries as one likes without any ill effects. Indeed some people believe that there is scarcely any other fruit comparable in this respect, and nearly everyone insisted that he had never heard of anyone suffering any ill effects from eating quantities of these berries. They are said to be mildly cathartic. The most convenient method for collecting these berries is to spread a table cloth, sheet, or cloth on the ground under the tree and then shake it. So many berries fall on the cloth that one can obtain as many as one likes in a short time.

I saw an abundance of these berries dried by the Indians of the Iroquois Nations. They collected them and spread them out to dry on broad pieces of bark in front of their houses. Later they stored

[5] A *qvart* equals 1/4 *aln* or about 6 inches.

[6] An *aln* is 24 to 36 inches.

them in vessels and used them for food in various ways. While with them I ate fresh bread baked in ashes in the customary fashion. It was full of these dried berries just like the puddings which our women pack full of raisins, currants, etc. Such bread did not taste bad to a hungry man. Some of the Europeans living in America also dry these berries and use them in many ways in preparing their food.

The berries fall as soon as they are dead ripe. Chickens, ducks, geese, and swine appear in numbers and eat up what has fallen to the ground. If a tree is shaken to obtain the fruit more quickly when these creatures are in sight, they are so greedy for it that it is difficult to keep them away. Of all these creatures, the ducks are usually the most impudent.

Many wild birds are also fond of this fruit. The passenger pigeons, which I discussed in detail in the Kongl. Vetenskaps Academiens *Handlingar* for the year 1759 on 275 and the following pages,[7] appeared in these trees in large numbers. They seem to be extremely fond of these berries and prefer them to anything else. If any mulberry tree grows wild in the forest or in an isolated spot, it will be full of these birds when the fruit is ripe, and they make quick work of the berries. If a few of them are shot, the rest fly a short distance into the forest, but in a few minutes may return to the same tree, thus making it easy to shoot a large number of these birds at this time of year.

Like other trees, they do not bear the same quantity of fruit every year. Frost while the mulberry trees are blooming means that few berries are produced the following summer. This happened in a large portion of the province of New York in 1750.

I saw trees in Pennsylvania which were not over 6 *qvarters* high and were, nevertheless, pretty full of berries. In this respect they occasionally begin to be useful very early.

When the berries are ripe or old, various types of insects appear on them. Among other insects seen in these trees, there are quite a number of species of *Scarabaeis* which is called *Scarabaeus corpore subolivaceo, elytrorum sutura & margine nigris, femoribus fuscis*. They dig deep holes in the ripest berries, and then they either eat them or lay their eggs in them. Another insect, which is *Elater castaneus nitidus, pilis crebris griseis pubescens*, was most frequently found in ripe berries after they were picked. They dug a deep hole in which the upper half of the body remained head first, while the lower or back part protruded from the berry. It is necessary therefore to examine berries before eating them; otherwise one may put these small creatures into the mouth.

These trees with their large crowns and thick leaves produce excellent shade during the summer. During that time of the year in warm countries, one can sit under them in the greatest contentment. When these trees stand in pastures or open fields, sheep, swine, and cattle rest under them during the hottest part of the day.

The wood is said to be unequalled for use as dowels for ships, yachts, and boats, because it withstands rot indefinitely. Therefore, a great many trees are destroyed in localities where ships and yachts are being built. This wood is also used a great deal for posts which are to be set in the ground because it rots slowly.

It is considered one of the best kinds of wood for cabinet work and competes with black walnut. When mulberry wood is worked, it is found to have a rather fine grain. I saw tea tables from it which had a natural brown color resembling that of walnut. It is said to have the same character as mahogany; the longer it is used the darker the color becomes. Mulberry wood is rather tough, so things manufactured from it are not easily broken. Many sharp tools are ruined in working this wood because it is very hard. Bureaus, wardrobes, and the like are made from it. I saw boards which were 3 to 4 *qvarters* broad at cabinetmakers. Some cabinetmakers insist that it will lose its beautiful color when it gets old; in contrast cabinet work in which wild cherry is used becomes more beautiful with age.

The greatest importance of this tree is the use of its leaves which are the most suitable food for silkworms. It is generally known that no establishment here has undertaken the breeding of silkworms, no mulberry trees have been planted, no silkworm eggs secured, and no silkworms kept, although each and everyone maintains that the leaves of the mulberry tree are the best food for silkworms. They gave the following reason for

[7] This article by Pehr Kalm was translated by S. M. Gronberger and printed under the title, "A Description of the Wild Pigeons Which Visit the Southern English Colonies in North America, During Certain Years, in Incredible Multitudes," in *Auk*, n.s., 28: 53–66 (January 1911), and in the Smithsonian Institution, *Annual Report, 1911*, 407–417.

their carelessness in this matter. The country was still so sparsely inhabited that it would be utterly useless to engage in silkworm culture and the additional work of spinning the silk. Labor was, because of the scant population, rather expensive. It was necessary to give 2½ to 3 shillings sterling for day wages and at certain times of the year still more. Women were paid proportionately less. In contrast, they found agriculture and the planting of flax and hemp together with the profits from the forest more to their liking, since that type of work did not require so much detailed care and skill as silkworm culture. The products of field and forest, such as grain, timber, and other things, brought a high price in the English, French, and Spanish colonies in the warmer part of America or the so-called West Indies, where there was a good market. There are several instances which show that the silkworm thrives very well on the leaves of this mulberry tree. A governor of Connecticut in New England had an estate lying a little north of New York where he kept a number of silkworms which he fed on the leaves of this mulberry tree. They got on very well and spun enough silk to clothe the entire family. I spoke to various individuals who said that they had at one time, for their own satisfaction, fed silkworms with leaves of this tree. They feed quite well on them and spin as much silk as a similar number of silkworms could have done when fed on the leaves of the white mulberry in Europe. On January 6, when Gordon was governor of Pennsylvania, he addressed the colonial assembly, consisting of farmers of the province, and tried by several arguments to persuade the inhabitants to take up this useful branch of husbandry. The assembly said it was a good suggestion, and they would think it over. But just then they had reason to look in other directions, and nothing came of it. It is quite possible, now that the English Colonies have definitely broken with their Mother Country, that they will pay more attention to this.

How strange it is that the Mighty Creator has given this tree protection, keeping its leaves untouched by all types of insects and worms which devastate other trees. In the summer of 1750 when the caterpillars did such grievous damage to the leaves of various types of trees in Pennsylvania, the mulberry trees remained entirely unharmed. I have discussed this in detail in K[ongl.] Vet [enskaps] Acad[emiens] *Handl[ingar]* for 1764 on 124 and the following pages. Of all the trees I saw in North America, there was none whose leaves were as untouched by worms and insects as this one. Occasionally I saw worms on the leaves but whether they belonged on them or obtained their nourishment from them, I can not say. No matter how carefully I observed, I never saw a worm eat any of the leaves of this tree; on the contrary, they were quite restless and acted as if they had gotten into a strange place. I know of only a single instance, when the caterpillars previously discussed were in dire need because of scarcity of food and had nothing else to seize upon; only then were they willing to eat the leaves of the mulberry tree. In the summer of 1750, a Swede by the name of Anders Rambo showed me a mulberry tree near his yard from which the caterpillars just mentioned had eaten up all the leaves. This was obviously due to the fact that the caterpillars had already eaten up all the leaves on the surrounding trees and had nothing left to eat. There were still some caterpillars which had not yet undergone metamorphosis, and they were driven by dire need to seize whatever leaves they could find in order to keep from starving to death.

[*Propagation.*] When the berries of this tree are to be collected for seed, careful observation should be made to make certain that the berries are taken from trees which are *androgynae*, that is, have both male and female flowers on them, or if it is a female tree that there is a male tree standing nearby, which seldom happens. Otherwise, if the berries are collected from a tree which has only female flowers and there is no tree with male flowers near, the seeds will not germinate. There is a great deal of trouble in drying berries which are collected for seed. Spreading them on the floor does not readily serve one's purpose, for they are quite juicy and it takes a long time to dry them. Before the berries are half dry, they nearly always become covered with mold which spoils the seeds. It does not help even if as much juice as possible is crushed out when they are spread on the floor to dry, for the crushed berries thinly spread on the floor lie there scarcely two or three days before they begin to mold. If all the slime and pulp surrounding the seeds are washed away, a good many seeds are lost in the washing since they are very small. The method which I found most satisfactory during my journey was to crush as much juice as possible out of the berries and then throw the crushed berries into fine dust and mix them together. The dust absorbed the moisture, whereupon the dust when

dried was sifted through a fine sieve leaving the seeds behind. This method usually requires two to three warm days for satisfactory drying. However, if you discover a tree from which you wish to collect seeds while traveling but have no time to stay over a day, then there is no choice but to suck the juice out of each berry separating each seed from the pulp which covers it and then drying the seeds for a short time. This is troublesome work.

From seeds which I collected in Pennsylvania at the beginning of June 1750 and planted as an experiment in boxes on the fifth of the same month, hundreds of small plants came up on the third of the following July.

After I returned to Åbo from America, I sowed some of these seeds in a hotbed in the spring of 1752. The seeds were then 2 years old. Three or four of them produced plants, most of them dying the first year because of lack of space to keep them during the winter. Finally due to their weakness only one was left. This I have kept in the *frigidarium* during the winters. When it finally was large enough to bloom I remembered much to my sorrow that the berries were from a female tree on which I had found no male flowers although I had carefully looked for them. I would fain that the observation of Mr. Bartram, previously discussed, would come to pass, namely that a new branch will be produced which will bear only male or hermaphroditic flowers; however so far only female flowers have developed. Last summer, 1775, the tree began to bloom at the end of May. It was blooming best at the beginning of June, and by August 1 the first berries began to ripen. This ripening continued gradually throughout the greater part of that month. The tree produced a quantity of large and rather tasty berries. It also looked as if some kind of seed had been formed; these I collected diligently and I plan to plant them carefully in the spring in order to see if any will germinate. When the berries began to ripen last summer, I had unexpected assistants sharing the berries, namely jackdaws and gray sparrows which had such appetites for this fruit that although I shot some of them and hung them over the tree they could not keep away. A net put over the tree was the surest protection. I have started other methods of multiplying this useful tree. I hope that this mulberry tree will be found in various localities in Sweden, since upon my homecoming from America seeds, while they were a year old, were abundantly given out in the months of May and June 1751 to several persons in Sweden, particularly those living in the southern provinces. The climate in the greater part of Sweden is much milder than in any part of Finland. Those who got seeds may have been lucky enough to have raised trees which have both male and female flowers.

# THE CAISSES POPULAIRES DESJARDINS OF QUEBEC

## A Modern System of People's Banks

JOHN T. CROTEAU

*Department of Economics, Catholic University of America*

The people's bank is a familiar institution in the history of agricultural credit. Systems of people's banks, some under governmental aegis and others operating independently, have served as stabilizing and protective influences in the agriculture of many European nations. The names of F. W. Raiffeisen, Luigi Luzzatti, and Charles Gide are well known to students of this subject. It is the purpose of this article to examine a North American adaptation of the people's bank, the *caisse populaire Desjardins* of Quebec, and to trace its evolution from a "humble loan society" to a unit in a people's banking system with assets of some $200,000,000 and embracing centralized inspection and auditing services, investment and legal counsel, check clearance systems, and central banks.

The name of Alphonse Desjardins is intimately associated with the origin and the development of the *caisse populaire*. Desjardins devoted his life to the propagation of this institution, seeing in the *caisse populaire* an ideal instrument for the social and economic betterment of the common man.

Desjardins was born at Lévis, Quebec, on November 5, 1854, of very poor parents. In his youth he learned from experience the sufferings of the lower-income classes. He attended the College of Lévis, but was forced to leave school at the age of sixteen in order to help his family. He became

a reporter on the *Canadien*, a Lévis newspaper. From 1879 to 1890 he undertook the publication of the record of the debates in the Quebec legislature. He also founded a daily newspaper, *L'Union Canadienne*, but for reasons of health discontinued its publication after several months.[1]

From 1891 to 1917 Desjardins was an official Hansard reporter in the Canadian House of Commons at Ottawa. When the subject of high interest rates was taken up in a parliamentary investigation, his position gave him a unique opportunity to view the problem of usury and its effects upon the poorer classes of farmers and workers. Impressed by the wretchedness and virtual slavery of whole classes of his people through the exactions of money lenders, he turned to a study of methods to remedy the situation. He devoted his leisure to research in the parliamentary library at Ottawa. He corresponded with Henry W. Wolff, Luigi Luzzatti, and Charles Gide, the European authorities on the subject of people's banks.[2]

Desjardins seems to have been particularly affected by a story which he heard delivered in the House of Commons by a member from Prince Edward Island. It was an account of the Bank of Rustico, founded in 1862 by a priest from France who had come to take charge of a country parish of poor Acadian farmers. This bank had operated successfully for 30 years until in 1892 it was forced to dissolve in order to comply with the new Canadian banking laws. This was one of the earliest people's banks in North America and was a major factor in reestablishing the Acadian farmers on the land. This bank seems to have impressed Desjardins with the possibilities of action in the field of people's banks.[3]

A number of cooperative credit systems were operating successfully in Europe around the end of the nineteenth century when Desjardins began his studies on methods of combating usury. There was no law to permit the formation of such banks in Canada, but Wolff, the English authority on cooperative banking, advised Desjardins to go ahead and to form one anyway. In 1900 Desjardins founded the Caisse Populaire de Lévis.[4]

It was not until 1906 that legislation was passed to authorize the formation of *caisses populaires* in Quebec; for six years Desjardins personally had assumed the risk attending the operation of the Lévis association. In the law that was enacted the arrangements of the Lévis group as to organization and management were followed.[5] In this law the forms of democratic control, limited liability, and the idea of dividing the work among a number of unpaid committees were taken over from Luzzatti, the Italian pioneer in this field. The Luzzatti structure was simplified greatly, and in its final form the administration of the *caisse populaire* was placed in the hands of a board of administration, a credit and a supervisory committee. All committees were elected by the membership. The internal administration was assigned to a manager, appointed by the board of administration.[6]

The Desjardins credit society apparently differed from its European predecessors in a fundamental respect. The 1906 law forbade the acceptance of deposits from nonmembers. As a result of this provision it has been pointed out that the Canadian credit societies "ceased to be banks in any strict sense of the term and became a new institution, half-way between the people's banks and the primitive friendly or provident societies."[7] This modification was probably necessitated by a provision of the British North America Act which places jurisdiction over banking in the hands of the Dominion government.[8] While the provincial legislature of Quebec did not have the authority to incorporate a bank, it could incorporate an association which did business only with its members. It is claimed that this membership limitation was made at Desjardins' wish.[9] Desjardins wrote enthusiastically about the wisdom of this provision of the law and the practical necessity of confining the operation of the *caisse populaire* within the boundaries of a parish.[10] But this membership

[1] Université Laval, Québec, Service Extérieur d'Education Sociale, *Caisses populaires* (n.d., c. 1947), 49–51.

[2] *Ibid.*

[3] C. Vaillancourt, "Credit Unions in Quebec," *The Bridge*, 6(1):76 (April 1941).

[4] Henry W. Wolff, *People's Banks* (London, 1910), 510–512.

[5] Myron T. Herrick and R. Ingalls, *Rural Credits* (New York and London, 1916), 449.

[6] Alphonse Desjardins, *The Cooperative People's Bank* (New York, 1914), 20–22.

[7] D. S. Tucker, *The Evolution of People's Banks* (New York, 1922), 234.

[8] *British North America Act*, 1867, 30 and 31 Vic., ch. 3, sect. 91, no. 15.

[9] Humfrey Mitchell, *People's Banks in North America* (63 Congress, 2 session, *Senate Document 580* Washington, 1914), 7.

[10] Alphonse Desjardins, *La Caisse populaire* (ed. 2, Montreal, 1944), 14.

limitation was more seeming than real; for all practical purposes in Quebec the *caisse populaire* had an open membership. Membership was open to everyone in the district, and a share cost only $5, payable over a term of 52 weeks, thus making it possible for people in the lowest income classes to become members.

Another of Desjardins' innovations was that of withdrawable share capital; that is, permitting the shares to be withdrawn on practically the same basis as deposits. Desjardins borrowed this idea from the mutual savings banks of New England.[11] In fact, Desjardins has been quoted as saying that the form of the administration "in the main is exactly the same as that which is found in the uncapitalized savings banks in the United States, with the exception that the deposits are used by the very persons who make them."[12]

In a more fundamental respect Desjardins' societies broke new ground. They not only granted loans for productive purposes, but they also made available to their members remedial loans at low rates of interest. The Schultze-Delitzsch and the Raiffeisen systems of people's banks in Germany eschewed this type of business, restricting their loans to tradesmen and to farmers. Luzzatti's banks in Italy had made some remedial loans, but more as a semicharitable accommodation than as a regular business. The New England savings banks had the power to make such loans but apparently never used it. Desjardins applied the ideal of mutual help to its logical limit and used the *caisse populaire* as an instrument to combat usury in the consumer as well as in the producer field. He also strongly emphasized the development of thrift by encouraging habits of systematic saving.[13]

Essentially, this was the cooperative credit institution, known elsewhere as the credit union, which has since spread all over Canada and the United States. Unless supplemented by the services of centralized organizations, however, it is an institutional form which has a number of serious defects, especially in the field of agricultural credit. This can be seen in the United States, for example, where in the years after 1935 the credit union was promoted vigorously by the United States Department of Agriculture. Despite this organizational effort—which incidentally was remarkably successful in industrial areas—the credit union made little progress in the field of agricultural credit.

Particularly serious in the early Quebec movement was the lack of a provision for a central bank to serve as a clearinghouse for the individual units and as a link with the money market. This central institution was the keystone of the European systems. An important function of a central union was the provision of auditing services for its member societies. Education, organization, and propaganda also can best be furnished by a central organization.[14]

While Desjardins strongly advocated a policy of decentralization and urged every credit society to stand on its own feet, he was not unmindful of the necessity of federation. In 1918, Desjardins started work on the organization of a federation and a central bank. Preliminary meetings were held, and on July 13, 1920, he sent a circular to all of the *caisses populaires* in the province suggesting that they come together to organize a federation and a central bank.[15] Death came to Desjardins, however, before he could complete this project. Shortly after his death in 1920, the first regional union was organized at Trois-Rivières, and in 1921 the Quebec regional union was founded. Similar federations were formed at Gaspé in 1923 and at Montreal in 1925.[16] There was no over-all provincial organization until 1932.

Desjardins had organized 102 *caisses populaires*, with assets of $6,300,000 and with 31,000 members, up to the time of his death in 1920.[17] The curve of growth leveled off somewhat during the 1920s. The depression of the early thirties bore down upon these organizations, and in 1932 the whole movement was saved from collapse only by assistance given by the Archbishop of Quebec in the form of financial guarantees.[18]

Although four regional unions had been formed between 1924 and 1925, the year 1932 marks the essential modification of the policy of decentralization and the transition of the *caisse populaire* from

[11] *Ibid.*, 20–25.

[12] Herrick and Ingalls, *Rural Credits*, 446.

[13] Desjardins, *The Cooperative People's Bank*, 29, 40–41.

[14] These and other criticisms are found in Henry W. Wolff, *Cooperative Credit for the United States* (New York, 1917), 302–311.

[15] Information supplied by C. Vaillancourt, managing-director of La Fédération des Caisses Populaires Desjardins, Lévis, Quebec.

[16] *Caisses populaires*, 183–184.

[17] P. E. Charron, "Le Commandeur Alphonse Desjardins," *Revue Desjardins*, 14(3):49 (March 1948).

[18] C. Vaillancourt, "Nous Avons Perdu le Sauveur des Caisses Populaires," *ibid.*, 13(2):22 (February 1947).

the "humble loan society," in Wolff's phrase, to the modern cooperative people's bank. In 1932 the Quebec Federation of Regional Unions of People's Banks was founded to coordinate the annual audits, to serve as a promotional agency, and to perform many other services. In the years that followed six additional regional unions were formed, bringing the total to ten; and hundreds of *caisses populaires* were organized, covering the province from end to end. The substantial rate of growth of the *caisses populaires* in recent years can be seen in Table 1.

enabling legislation. But in 1948, only twelve years later, total membership had increased tenfold, exceeding a half-million members out of a total population of around 3,700,000. The early growth in assets was more rapid than that of members or of *caisses*; but total assets declined after 1930 and then began to rise after 1935. The growth of total assets was rapid after 1940, climbing from $21,000,000 in 1940 to $197,000,000 on December 31, 1948.

An increase in the number of new *caisses* in the years after 1920 resulted in a decline in the average membership per *caisse*. The average membership

TABLE 1

*Number, Membership, Total Assets, Average Membership, and Average Assets of the Caisses Populaires Desjardins of Quebec, 1915–1948*

| *Year* | *Number* | *Members* | *Assets* | *Average membership per caisse* | *Average assets per caisse* |
|---|---|---|---|---|---|
| 1915 | 91 | 24,000 | $2,028,000 | 264 | $22,000 |
| 1920 | 113 | 32,000 | 6,307,000 | 284 | 56,000 |
| 1925 | 122 | 33,000 | 8,262,000 | 270 | 68,000 |
| 1930 | 179 | 46,000 | 11,179,000 | 256 | 62,000 |
| 1935 | 202 | 43,000 | 10,044,000 | 213 | 50,000 |
| 1936 | 234 | 50,000 | 10,847,000 | 214 | 43,000 |
| 1937 | 256 | 57,000 | 13,275,000 | 222 | 52,000 |
| 1938 | 388 | 75,000 | 16,058,000 | 193 | 41,000 |
| 1939 | 406 | 91,000 | 17,848,000 | 224 | 44,000 |
| 1940 | 562 | 124,000 | 21,400,000 | 220 | 38,000 |
| 1941 | 601 | 146,000 | 26,797,000 | 243 | 44,000 |
| 1942 | 650 | 188,000 | 36,170,000 | 289 | 55,000 |
| 1943 | 765 | 237,000 | 60,501,000 | 309 | 79,000 |
| 1944 | 852 | 300,000 | 77,874,000 | 352 | 91,000 |
| 1945 | 908 | 371,000 | 119,089,000 | 410 | 131,000 |
| 1946 | 978 | 438,000 | 152,176,000 | 448 | 156,000 |
| 1947 | 1,011 | 486,000 | 176,372,000 | 481 | 174,000 |
| 1948 | 1,047 | 529,000 | 197,447,000 | 505 | 188,000 |

Sources. 1915–1941, *Canada Year Book, 1942* (Ottawa, 1942), 552; 1942, *ibid., 1943–44*, 544; 1943, *ibid., 1945* 625; 1944, *ibid., 1946*, 626; 1945, *ibid., 1947*, 1041; 1946, 1947, and 1948, statistics issued by La Fédération des Caisses Populaires Desjardins, Service de la Statistique (affiliated *caisses* only).

According to Table 1, the number of *caisses populaires* grew slowly until the middle of the thirties; the rate of growth in the period after 1915 and 1920 was such as to double the number of *caisses* every fifteen years. The rate of growth from 1935 to 1940 was, roughly speaking, about three times as fast, the number being doubled every five years. Organization of new *caisses* eventually will fall to zero, whenever the province is completely covered. The growth in membership was correspondingly slow in the early days of the movement, totaling only 50,000 as late as 1936, thirty years after the enactment of the Quebec

reached a low of 193 in 1938. The 1920 average of 284 members per *caisse* was not exceeded until 1942, when the average membership rose to 289. Average membership rose rapidly after 1942 and reached 505 in December 1948. Average assets per *caisse* climbed to $68,000 in 1925, and this average was not exceeded until 1943. The 1943 average of $79,000 was almost doubled within the next three years, reaching $156,000 in 1946. The average was $188,000 per *caisse* in December 1948. These statistics seem to show that the expansion of the movement was on an extensive basis until the 1940s. In the 1940s an intensive development took

place with the average membership more than doubling and the average assets increasing almost fivefold in the years from 1940 to 1948.

An examination of the detailed statistics contained in the biannual report of the Provincial Bureau of Statistics shows the small and intimate character of the *caisse populaire*.[19] In 1944 almost three-fourths of all the *caisses populaires* had a membership of less than 400, and more than four-fifths had a membership of less than 500. In the same year almost one-half of the *caisses populaires* had total assets of less than $50,000, and almost 72 percent had total assets of less than $100,000.

TABLE 2

*Consolidated Balance Sheet for 887 Caisses Populaires at End of Fiscal Year 1946*

| *Assets* | | *Percent* |
|---|---|---|
| Loans | $71,036,886 | 48.9 |
| Investments | 46,672,949 | 32.1 |
| Cash on hand | 24,677,607 | 17.0 |
| General expenses | 1,047,012 | .7 |
| Miscellaneous | 1,584,893 | 1.3 |
| | $145,019,347 | 100.0 |
| *Liabilities* | | *Percent* |
| Capital | $8,450,789 | 5.8 |
| Deposits | 129,898,123 | 89.6 |
| Dividends payable | 64,625 | .05 |
| Interest payable | 51,587 | .04 |
| Miscellaneous | 266,452 | .2 |
| Reserves | 3,602,985 | 2.5 |
| Entrance fees and earnings | 2,684,786 | 1.8 |
| | $145,019,347 | 100.0 |

Source. *Caisses Populaires, 1945 et 1946* (Quebec, 1948), 208.

The top 1 percent—7 *caisses*—had assets of $1,000,000 or over.

Table 2 presents a consolidated balance sheet of the 887 *caisses populaires* reporting to the provincial statistician in 1946. Of the total assets of $145,000,000, $71,000,000, or almost 49 percent, was invested in notes and mortgages and almost $47,000,000, or 32 percent, was in bonds (*placements*). Almost $25,000,000, or 17 percent, was held in cash. Minor items made up the remaining 2 percent. Capital stock (*capital social*) of almost $8,500,000 amounted to almost 6 percent of the liabilities. Deposits (*épargne*) of almost $130,000,000 comprised almost 90 percent of the liabilities. Reserves of $3,600,000 were 2.5 percent of the liabilities.

TABLE 3

*Consolidated Statement of Receipts and Disbursements for 887 Caisses Populaires, Fiscal Year 1946*

| *Receipts* | |
|---|---|
| Cash on hand, first of year | $16,042,624 |
| Capital (*capital social*) | 2,354,922 |
| Deposits (*épargne*) | 256,594,994 |
| Loan repayments | 27,912,928 |
| Investments repaid | 7,643,724 |
| Entrance fees | 73,525 |
| Earnings (interest, etc.) | 4,447,464 |
| Loans (*emprunts*) | 1,155,198 |
| Miscellaneous | 242,151 |
| | $325,467,530 |
| *Disbursements* | |
| Capital withdrawn | $641,217 |
| Deposits withdrawn | 233,576,659 |
| Loans | 40,293,301 |
| Investments (*placements*) | 20,855,652 |
| Interest paid on deposits and loans | 1,925,208 |
| Dividends (*bonis*) | 258,528 |
| Loans repaid (*remises sur emprunts*) | 1,380,810 |
| General expenses | 1,858,548 |
| Cash on hand, end of year | 24,677,607 |
| | $325,467,530 |

Source. *Caisses Populaires, 1945 et 1946*, 208.

Table 3 contains a consolidated statement of receipts and disbursements of the *caisses populaires* for 1946. The receipts and disbursements together account for a total business done in 1946 of well over $600,000,000. With this volume of business in only one province, it would seem that the *caisse populaire* movement might almost be described as big business. The turnover of deposits should be observed; receipts of deposits amounted to $265,000,000 and withdrawals to $233,000,000. This shows how active are the deposit accounts; the deposits are withdrawable by check. The other items in the table are self-explanatory.

[19] *Caisses populaires, 1943 et 1944* (Quebec, 1946), 7–19, 135–155. The Provincial Bureau of Statistics publishes extremely detailed statistics on the *caisses populaires* in biannual reports. There is usually a delay of two or three years before these reports are issued, however. Considering that some 200 *caisses* were organized between 1944 and 1948, it is probable that the membership and size distributions do not differ materially between the two dates.

The convenience of being able to withdraw deposits with checks probably accounts in large part for the popularity of deposits in comparison with share capital. Most of the *caisses* pay a higher rate in dividends on capital than in interest on deposits. This differential does not seem to influence members to any great extent in inducing them to place their funds in share capital rather than in deposits. The great popularity of deposits would seem to indicate that the members more and more are looking at the *caisse populaire* as a banking institution rather than as an investment society.

Corresponding to the growth of the *caisses populaires* has been an increase in the amount of lending. From 1920 to 1940 the amount lent fluctuated from slightly under 3 to 6 million dollars a year, dropping to a low point during the worst of the depression. During the forties, however, the amount lent annually rose from $5,700,000 in 1940 to more than $61,000,000 in 1946. While the amount lent annually varied within rather small limits between 1920 and 1940, the loans outstanding at the end of the year rose almost continuously from $5,000,000 in 1920 to $117,000,000 in 1946. The number of borrowers also showed a continuous rise, dropping a little during the depression; the number of borrowers rose from 9,200 in 1920 to 59,000 in 1946. The average size of the loans was held between $200 and $280 from 1920 to 1939; it dropped to $187 in 1940 but rose rapidly after that date. The average amount due per borrower stayed between $500 and $700 until 1943, when it rose to $918 and reached almost $2,000 in 1946.[20]

The large averages of the 1940s are apt to be misleading. The reports of the provincial statistician group all types of loans in the totals—personal loans, mortgages, and bond investments. With the growth in bond investments, loans to cooperatives, and mortgage loans in recent years, the average gives a distorted picture. Of the total $40,200,000 of loans made in 1946, as shown in Table 3, $15,500,000 were on members' notes; $24,700,000 were on mortgages. In addition another $20,800,000 were placed in bonds. Thus of the $61,100,000 in loans made in 1946, 25.4 percent was lent on notes, 40.5 percent on mortgages, and 34.1 percent invested in bonds.

The $15,500,000 in loans made on the notes of 59,000 members in 1946 are analyzed in Table 4. According to this table, almost 5,000 loans were for amounts of less than $25; while these very small loans accounted for 8.5 percent of the loans made, they involved only 0.4 percent of the total money lent. Loans of less than $100 comprised 38.3 percent of total loans, but only 6.7 percent of the total lent. Loans of less than $500 accounted for 88.7 percent of the total loans, but only 45.6 percent of the sum lent. On the other hand, while only 11.3 percent of the loans were for more than $500, these larger loans accounted for 54.4 percent of the total lending. The picture presented in this table seems to indicate that the *caisses populaires* can easily take care of their members' demand for production loans with only a small fraction of their total resources and that the bulk of the recent *caisse populaire* lending has been in rather large amounts, in loans to cooperatives, in mortgages, and in provincial and other bond issues.

TABLE 4

*Analysis of Loans Made on Notes by the Caisses Populaires During the Fiscal Year 1946*

| *Size of loan* | *Number of loans* | *Percent* | *Cumulative percent* | *Amount of loans* | *Percent* | *Cumulative percent* |
|---|---|---|---|---|---|---|
| $1 to 24.99 | 4,960 | 8.5 | 8.5 | $60,228 | .4 | .4 |
| 25 to 49.99 | 5,434 | 9.2 | 17.7 | 191,740 | 1.2 | 1.6 |
| 50 to 99.99 | 12,104 | 20.6 | 38.3 | 792,654 | 5.1 | 6.7 |
| 100 to 199.99 | 14,917 | 25.3 | 63.6 | 1,888,772 | 12.2 | 18.9 |
| 200 to 499.99 | 14,804 | 25.1 | 88.7 | 4,152,966 | 26.7 | 45.6 |
| 500 to 999.99 | 4,429 | 7.5 | 96.2 | 2,558,398 | 16.4 | 62.0 |
| 1,000 and over | 2,334 | 3.8 | 100.0 | 5,899,431 | 38.0 | 100.0 |
| | 58,982 | 100.0 | | $15,544,099 | 100.0 | |

Source. *Caisses Populaires, 1945 et 1946*, 70–71.

The *caisse populaire* movement in Quebec operates on three levels: local, through the *caisse populaire* itself; regional, through the regional union; and provincial, through the federation. By a judicious institutional combination of function and re-

[20] *Ibid.*, 179; *ibid.*, *1945 et 1946*, 209.

sponsibility on the three levels, the attempt is made to preserve the strengths of decentralization —intimacy, economy, independence, integration in parish and family life, and the personal educative effects of the responsibility of management upon the officers and members—with the essential functions that can best be performed by centralized institutions—auditing, investment and legal counsel, education and promotion. The movement will be examined on each of the three levels of operation.[21]

*The Local Unit—La Caisse Populaire.* The *caisse populaire Desjardins* is closely integrated to the parochial life of the people. In itself the *caisse populaire* is not a religious organization, but it is ancillary to the parish structure. The typical *caisse populaire* is organized to serve the membership of a Catholic parish; as was shown in Table 1, it is small, averaging around 500 members. Of the 1,056 *caisses populaires* in existence in the province of Quebec on August 31, 1948, only 8 were organized among occupational groups.

It is contended that the parochial base is open to a membership with some diversification of employment, and hence has greater economic stability than the occupational type. Perhaps a more important factor is the intimacy of a homogeneous parish group in cultivating attitudes that make for successful management; people are willing to contribute time and effort to committee work in a parish organization. They identify the success of the *caisse* with that of the parish. An official of the *caisse populaire* is a parish leader and admired by his fellows. Most important, the parish priest—a powerful person in Quebec—can watch over the progress of the *caisse* and in many ways can assist in its development. The usual parish is large enough to provide an adequate number of members and small enough to dispense with the need for a costly investigation of loan applicants. Pressure by parish neighbors is usually effective in the collection of delinquent loans. The impression should not be given that *caisses populaires* have been founded exclusively for Catholics. There are in Quebec English-speaking credit unions composed almost entirely of Protestant members, and many *caisses populaires* have Protestant members. In a province that is 90 percent Catholic, the parish unit simply is a convenient one for the organization of a *caisse populaire.*

There are, moreover, considerable economies connected with the *caisse populaire.* To manage a small *caisse populaire* is not a complicated task and requires no extraordinary entrepreneurial ability. It becomes an interesting hobby to the officers. Part-time workers can be secured at a low cost. When expert advice is needed, it can be obtained from a central unit free of charge. Elaborate quarters are avoided; a room in a parish hall is usually adequate. Of course, when the assets of a *caisse populaire* grow into the millions, full-time help is hired and permanent offices are secured. But even in the large *caisses populaires* there is little ostentation. An estimate of the economical operation of the system can be obtained by examining the ratio of expense to total business done. Adding the total receipts and the total disbursements of the *caisses populaires* in the year 1946, as shown in Table 3, the *caisses populaires* in that year did a total business of some $650,000,000. Expenses of $1,800,000 were 0.28 percent of the total business done. On the face of it this would seem to be an extremely low expense ratio. Unfortunately, there are no similar systems with which to make a comparison. Many factors, therefore, explain the suitability of the parish unit—where it exists—as a basis of organization of a cooperative credit society. It should be pointed out, however, that the parish unit is stronger in a rural than in an urban community.

The autonomy of the local *caisse populaire* is stressed in Quebec. It is, of course, an autonomy under the law; but the act under which they operate allows the officers of the *caisse* considerable discretion in management. The leadership of the Quebec movement emphasizes the importance of the local *caisse populaire* and the advantages of decentralization. The regional unions and the provincial federation are designed to serve and to supplement the work of the local *caisse.* But this local autonomy does not necessarily mean that matters of general policy are determined by the members of the local units at the bottom. Probably in this movement, as in most others, the active policy-making is initiated by the leaders of the federation, with the membership on the regional and on the local levels exercising more a veto power than an actual administration of the movement. But provided that they stay within the broad provisions of the law, the management of the local

[21] The factual information contained in the next three sections not otherwise documented is from unpublished material furnished by La Fédération des Caisses Populaires Desjardins, Lévis, Québec.

*caisse populaire* is autonomous within the scope of its jurisdiction.

A man who belongs to a parish becomes a member of a *caisse populaire* by paying an entrance fee—minimum, 10 cents per share—and by subscribing for one share of stock, valued at $5. A member has a year to pay for the share, by weekly installments if desired. A member has the right to vote and to hold office. Women, minors, and nonparishioners of the district may join a *caisse populaire*, but they have the status of "auxiliary members." An auxiliary member may neither vote nor hold office, but apparently may save or borrow on the same terms as a full member. Corporate bodies, such as farmers' organizations, cooperatives, school districts, municipalities, and other similar groups may become members of a *caisse populaire*.[22]

Once a member has joined he may buy additional shares, or he may make "deposits." Both shares and deposits are withdrawable, but the entrance fee on each share goes permanently to the reserves of the *caisse populaire*. The potential loss of the entrance fee and a higher rate of yield on share capital are intended to make the share capital a relatively permanent investment. A member will use his deposit account, instead of his capital account, for funds that are placed in the *caisse* for a temporary period. Deposits are withdrawn by check. Share capital and deposits in a *caisse populaire* correspond roughly in usage to the savings account and the current account respectively of the commercial bank. Under certain conditions, as discussed below, a member may borrow.

The management of a *caisse populaire* is under the authority of the general membership meeting which follows the usual cooperative practices of one-man-one-vote and no proxy voting. A simple majority vote prevails in most questions, except that of amendment of the bylaws, where a three-fourths vote is required. There are no special quorum requirements; those members present constitute the quorum. The business conducted is that usual to such meetings, adoption of reports and a general review of the work of the organization. At the general meeting are elected the three active committees where the actual administration functions.[23]

The board of directors (*conseil d'administration*) conducts the general administration of the *caisse populaire*. It consists of at least five members and elects from its own number a president, a vice president, a secretary, and a manager. Any one of the officers may serve as manager. These are the officials not only of the board but of the *caisse populaire* as well. In general, the board has the duties of any corporate board of directors. These duties are set forth in detail in the bylaws. All officers and committeemen must serve without remuneration; only the manager may be paid.[24]

A supervisory committee (*conseil de surveillance*) of three members is also elected at the annual meeting. The members have three-year terms. Members of this committee may serve neither on the board of directors nor on the credit committee, nor may they borrow or guarantee another member's loan. This committee has broad supervisory powers; it has access to all books and records. Two members may call a special meeting of the society if they should discover any irregularities. At least once a year this committee must see to it that the books are audited by an inspector from the federation. The committee reports to the annual meeting.[25]

All loan applications are passed on by a credit committee (*commission de crédit*) of three members, elected at the annual meeting for terms of three years. Members of this committee may not serve on any other board, nor may they borrow or guarantee loans. This committee fixes its own time of meeting; it usually meets weekly. Two members must be present to pass on a loan; but approval in all cases must be by a unanimous decision of those present. Should the credit committee refuse to approve a member's loan application, the member has the right to appeal from the credit committee's decision to the board of directors. A majority vote of the directors, after hearing the member and the committee, decides the issue. Small loans are given preference over large ones. The credit committee fixes the interest rate, the terms of the loan, and the security required. The applicant must state the purpose of the loan, and the credit committee takes into consideration, quite apart from the question of possibility of repayment, whether such a loan will be to the member's best interests.[26]

Loans are made for productive and provident

[22] *Loi concernant les syndicats coopératifs* (1948; henceforth cited as *Loi*), ch. 5–12; also *Statuts de la caisse populaire* (Québec, Imprimerie Laflamme, 1939), ch. 2, art. 7–18, ch. 3, art. 19–29; henceforth cited as *Statuts*.

[23] *Loi*, ch. 25–29; *Statuts*, ch. 8.

[24] *Loi*, ch. 15–19, 23; *Statuts*, ch. 7, art. 52–59.

[25] *Loi*, ch. 20–21; *Statuts*, art. 69–74.

[26] *Loi*, ch. 22; *Statuts*, art. 60–68.

purposes only. The principal purposes for which loans are granted are: consolidation of debts, purchase of seed, fertilizer and feed, purchase of cattle and farm implements, housing, and repairs. A special note form is used and is good for thirty years without prescription. The interest alone is prescribed after five years. This form is used for short-term loans of small amounts. The term of repayment rarely extends for more than a year. Loans are repayable in installments. The rate of interest is usually 6 percent per annum—*i.e.*, 6 percent simple interest. Rates lower than 6 percent are found. No commissions are charged, and there are no minimum fees.

Mortgage loans are also granted. As a rule the policy of the credit committee is to lend on mortgages up to 60 percent of the actual construction cost of the property. The moral character of the borrower is an important factor in influencing the credit committee's decision to lend. The interest rate on mortgages is usually 5 percent per annum and lower in some cases. Mortgage loans are made without commissions or other fees and are repayable in monthly installments. They may be repaid in advance of the stated maturity date.

The *caisses populaires* also make loans to cooperatives. In Quebec there are two provincial laws regulating cooperatives. The Cooperative Syndicates' Act regulates the *caisses populaires* and most of the cooperative stores. This law allows a society to borrow twice the total of its paid-up capital and reserves. In interpreting the act, savings entrusted to a regional association by its members, and loans entirely secured by the pledging of securities or movable effects are not considered as borrowed sums. The other act, the Farmers' Cooperative Act, governs most of the cheese and butter factories. The limit of borrowing under this act is four times the subscribed capital. Loans are made by the *caisses populaires* within these legal limits. Interest rates are 5 percent or less.

*The District Unit—L'Union Régionale.* For organizational purposes the province of Quebec is divided into ten districts. The *caisses populaires* in each district are organized into regional unions.[27]

[27] In addition to the 10 regional unions connected with the movement under discussion, 2 other small regional unions operate in the Province of Québec. One is an independent federation of 9 *caisses* in Montreal and the other a league of 15 "English-speaking" organizations. In 1945 the member societies of these 2 regional unions had around 14,000 members and almost $6,000,000 in assets. *Canada Year Book, 1947*, 1041.

Generally speaking, the function of the regional unions is to promote and to expand the cooperative credit movement. They take the initiative in organizing new *caisses populaires* and in assisting the newly-formed organizations in solving their problems. The regional unions employ some twenty fieldmen in the province.

Eight of the ten regional unions operate *caisses centrales*, or central banks. The central bank holds on deposit the funds of the *caisses populaires* which would otherwise remain unproductive and acts as a clearinghouse for *caisse populaire* checks.

The federation strongly recommends that the local *caisses populaires* maintain a highly liquid position; it urges that 50 percent of the assets consist of cash on hand, or on deposit at the central bank, or in a chartered bank, or in high-grade bonds. The remaining 50 percent of the *caisses'* assets may be invested in loans to members, in mortgages, and in other securities. Such an investment policy should, in the opinion of the leaders of the movement, enable the *caisses populaires* to remain solvent, even in the event of a sudden depression.

The regional union is the key to the implementation of this investment policy. Around 75 percent of the cash balances of the local *caisses populaires* is channeled to the regional unions. Through this mechanism it becomes possible to shift funds from those *caisses* where there is a surplus to others where there exists a demand for funds. In other words, the regional unions perform the same services for member *caisses populaires* and affiliated cooperatives as the local *caisse populaire* performs for its members. The funds that are not lent to member *caisses populaires* or affiliated cooperatives are invested in bonds, in compliance with the provisions of the act.

Members of local *caisses populaires* may write checks on their deposits. These checks of course may be cashed at the local *caisse* upon which they are drawn. But if the person receiving the check lives in another part of the province, he may deposit it in another *caisse populaire*, and it will be cleared through the regional unions. These *caisse populaire* checks are generally accepted throughout the province, even by the commercial banks.

The function of the regional union as a clearinghouse is not the least important service that it offers. In fact, some say that the introduction of the use of checks in the *caisses populaires* is one of the main factors explaining the expansion in years after 1932. By enabling *caisse populaire* members

to draw checks on their deposits it became possible to by-pass the chartered banks and to concentrate the entire deposits of the people in their own banking system. In doing this the Quebec movement is unique, as every other system of cooperative credit, in North America at least, relies at one place or another on the services of the commercial banking system. In adopting the check and the clearinghouse the Quebec movement has made a powerful contribution to the technique of cooperative credit.

While the federation has charge of the annual inspections, the regional unions assist in this work, particularly in difficult cases which require more time and care than the federation inspectors can give. In such cases where the local *caisse populaire* is at fault, through negligence or carelessness, and when it has the means, it must pay for such extra work. The regional unions also undertake the audit of the monthly reports submitted by each *caisse populaire* and after auditing them send one copy to the federation.

A number of the regional unions offer the service of safekeeping for the bonds of affiliated *caisses populaires*. Some regional unions also operate a supply and stationery service for their member *caisses*.

For these services the member *caisses populaires* pay dues based on the assets and the earnings of the *caisses*. According to the current dues schedule, the regional union receives from each affiliated *caisse populaire* annual dues of .1 percent of assets plus 2 percent of the gross earnings. From 1932 to 1948, 50 percent of the dues contributions went to the regional unions and 50 percent to the federation. Since 1948 10 percent of the dues is placed in a reserve fund, 60 percent goes to the federation, and the balance to the regional unions. Affiliation to a regional union entitles the local *caisses populaires* to free inspection annually, or at times more often, and to all of the other services offered by the regional union. Indirectly, through its affiliation with the regional union, the local *caisse populaire* benefits from the subsidy which the government grants to the federation.

The regional union is governed in almost the same way as the local *caisse populaire*. Each affiliated *caisse populaire* is entitled to one vote and is represented by a delegate at the annual meeting of the regional union. At this meeting a board of directors and a supervisory board are elected. The board of directors exercises general administration of the regional union. The officials of the central bank, of the *caisse centrale*, are the same as for the regional union, except that in the bank a credit committee is appointed to pass upon applications for loans. As a matter of fact, the operations of the regional unions and the central banks are so intertwined that for all practical purposes they are the same institution. Technically speaking, the central bank is a department of the regional union.

On December 31, 1948, eight regional organizations had assets of more than $25,000,000. Two of the regional unions do not operate *caisses centrales*. The Quebec organization with headquarters at Lévis was the largest with assets approaching $10,500,000 and the Montreal union was the second largest. With 1,163 member societies there were only 118 borrowing organizations. Total loans amounted to $4,400,000 and mortgage loans $367,000. More than 70 percent of the total assets, $17,700,000, were invested in bonds and $2,500,000 were held in cash. With 80 percent of their assets in bonds and cash, the regional unions maintained a highly liquid position, one capable of accommodating the member units if ever a sudden need for funds should arise.

*The Provincial Organization—La Fédération des Caisses Populaires Desjardins*. To cap the movement the ten regional unions are organized into the federation (La Fédération des Caisses Populaires Desjardins). Each regional union has one delegate at the annual meeting of the federation. The board of directors of the federation, however, is composed of two delegates from each regional union. The personnel of the federation consists of a managing director, a chief inspector and his 2 assistants, a statistician-accountant, 31 inspectors, and 20 other employees. In addition, the federation employs a legal counsel and an auditor.

After the near disaster of 1932 the federation was formed to take charge of the inspection of the *caisses populaires* and to supervise the investments of the *caisses*. The law was amended to give these powers to the federation.[28] In addition to its legal functions the federation has become the over-all organization to represent, to protect, and to defend the *caisse populaire* movement.

Under the terms of a contract between the provincial government and the federation the inspection of the local *caisses populaires* is carried out by the federation. At least annually, and at times

[28] *Loi*, ch. 54 and 40.

more often, the federation inspects each *caisse populaire* in the province. The statistical reports of the *caisses* are accepted by the government only if certified by a federation inspector.

Whenever possible, at the conclusion of the examination the inspector holds a joint meeting with the directors and the credit and supervisory committees. He comments on the condition of the *caisse* as he has found it, and he gives whatever advice he considers necessary to improve operations. The federation analyzes his report and prepares a summary comparative statement of the reports of the current and of the preceding years, with such recommendations as are necessary. The report and the accompanying letter are forwarded to the president of the *caisse populaire*.

The *caisses populaires* are required to report monthly to the regional unions. The unions send these reports to the federation. These reports serve as a basis for a permanent inspection. Such reports will frequently yield signs of bad administration, irregularities, or neglect. The failure to send in a report is a warning sign, and the union or the federation can send a field man to investigate. While directors of local *caisses populaires* or of regional unions can be held personally responsible for losses suffered by the associations if they fail to comply with the provisions of the act or the requirements of the federation,[29] or continued violation could lead to a cancellation of affiliation privileges, it is the policy of the federation to work by persuasion rather than by force. Rarely are the sanctions of the law invoked. It has been found that most of the violations are caused by ignorance rather than by ill will and that proper instruction will usually correct a harmful condition. The inspectors meet twice a year to study such problems and to complete their training. As a rule the field men of the unions are invited to attend these meetings.

An experienced man is in charge of the federation's statistical service. Every six months, at the end of June and December, the federation issues a statement on the general financial situation of the *caisses populaires*. These statistics are compiled from the monthly reports. The statistical department is also in charge of research. This work is likely to increase in the future.

Chapter 40 of the act sets forth in general terms the types of investments that a *caisse populaire* may make. It states that all bonds—government, municipal, diocesan, etc.—must receive the approval of the federation before it is legal for a *caisse populaire* to invest in them. The federation, therefore, has an investment service with up-to-date information on all of the bond issues offered in the province. This service has become so extensive that the federation is often consulted by brokers previous to their making a bid on an issue. Market prices are closely followed. With the rapid expansion of the movement has come an increased demand for gilt-edged investments. The investment service of the federation has enabled the movement to follow the market expertly and, it is claimed, has resulted in profits of thousands of dollars to the *caisses populaires*. During the war the movement invested heavily in victory loans. The existence of millions in the *caisses* also means that the province of Quebec has a strong potential support for its bond issues.

The federation retains a legal counsel. The local *caisses populaires* may secure legal advice from this counsel, free of charge. Answers to legal questions of a general interest are printed monthly in the *Revue Desjardins*.

The *Revue Desjardins* is the monthly periodical of the movement. Published by the federation, it is an extension and educational organ. Each number contains an editorial by the general manager, articles by the editor and the chief inspector, and other timely and pertinent information concerning the movement. The federation also publishes the *Catéchisme des Caisses Populaires Desjardins*, by the Right Reverend P. Grondin. Forty-six thousand copies of this effective little work, now in its eighth edition, have been distributed.

Extension and educational work, generally speaking, is in the charge of the regional unions; but the division of labor is not a strict one. A large share of the revenue of the federation is made available to the regional unions for extension activities. Most of the men working for the unions are also in the employ of the federation.

Applications for the establishment of new *caisses populaires* are often addressed to the federation, rather than to the regional union. After the organization of a *caisse* all of the relevant documents are sent to the office of the federation. The federation completes all of the formalities and forwards a copy of the application to the provincial secretary. Each time that a new *caisse populaire* is organized, the federation notifies all of the inspectors and sends them a copy of the bylaws.

[29] *Ibid.*, ch. 50.

Before the foundation of the Société d'assurance des Caisses Populaires in 1945, the *caisses populaires* could secure fidelity bonding, burglary, and other specialized types of insurance from the federation. Now this insurance company handles this business. The federation also sells stationery and supplies to its members. This service has effected a large measure of standardization of forms as well as a reduction in costs, it is claimed.

The work of the federation is financed by means of a subsidy from the provincial government at the rate of $100 each for the first 500 *caisses populaires* and of $50 each for additional *caisses* from 500 to 1,000. The subsidy is paid for each *caisse populaire* organized or inspected from June 1 to May 31 of the following year. This subsidy amounted to $75,000 for the year ending on May 31, 1947. In addition, as already mentioned, 60 percent of the dues paid to the regional unions by the local *caisses populaires* goes to the federation. This totaled almost $99,000 in the year ending March 31, 1948. There are revenues from various other services conducted by the federation, such as the sale of stationery and supplies, educational material, and the like. Total expenses of the federation for the year ending on March 31, 1948 amounted to $172,000.

The government subsidy does not pay the entire cost of the inspection service. Nevertheless, recent articles in the *Revue Desjardins* have been exploring the possibility of doing away with the subsidy and becoming perfectly independent of financial assistance from the government. Whether this will eventuate in the near future remains to be seen.

*Conclusion.* This study has traced the evolution of the *caisse populaire* from a small, primitive savings and loan society to a modern people's bank. Building on European models the *caisse populaire* movement has gradually adjusted its institutional structure through the addition of centralized agencies to provide for a concentration of reserves, check clearing, auditing, promotion, and education. This has resulted in a phenomenal growth of the system, particularly from 1936 to 1948; in these years membership increased from 50,000 to 529,000 and assets rose from $10,000,000 to $197,000,000.

The *caisse populaire* movement in developing its own central banks and clearinghouses has bypassed the existing commercial banking system, a unique accomplishment for a system of cooperative credit. The growth of the *caisses populaires* has inevitably changed the focus of the movement from a primary concern with small-scale saving and lending on a parish-wide basis to a consciousness of the larger problems of deposit banking and the investment market. This system, with almost $200,000,000 in assets, is a ready source of capital, especially for the local and cooperative-owned enterprises of the province. It is a strong potential support of the provincial bond market.

When the movement was small, to maintain both the ideal and the practice of decentralization was not difficult. But the movement of today, with a control of hundreds of millions of dollars requires a tight check over each individual unit. The problem which the leadership of the Quebec movement faces is to balance the strengths of decentralization, both personal and economic, with the necessary supervision and control exercised by centralized organs. This is a difficult task, calling for constant member education and the discovery of ability and qualities of leadership. The leaders of the Quebec movement have approached this mission in the spirit of their founder, Alphonse Desjardins. If they succeed—and there is every indication of success—they will have a people's banking system that not only serves the people, but one that builds a people.

## NEWS NOTES AND COMMENTS

### APRIL 1950 MEETING

The Agricultural History Society held a joint session with the Mississippi Valley Historical Association at the Oklahoma Biltmore Hotel in Oklahoma City, Oklahoma, on the afternoon of April 20, 1950. At this session, the following papers were read: "Steam Power on the American Farm, 1850–1880," by Reynold M. Wik, Bethel College; "The Land Mortgage Company in the Early Plains States," by Allen G. Bogue, University of Western Ontario; and "Ceres and the American Men of Letters Since 1929," by Clayton S. Ellsworth, College of Wooster. Robert G. Dunbar of Montana State College, Paul F. Sharp of Iowa State College, and Norbert R. Mahnken of Oklahoma Agricultural and Mechanical College discussed the papers formally, and Rodney C. Loehr of the University of Minnesota presided.

At the joint session of the Forest Products History Foundation with the M.V.H.A. on the morning of

April 20, Arthur R. Reynolds of Colorado State College of Education presented a paper on "Sources of Credit for a Frontier Lumber Company: The Daniel Shaw Lumber Company as a Type Study," and George B. Engberg of the University of Cincinnati, a paper on "Collective Bargaining in the Lake States Lumber Industry." Everett E. Edwards presided.

### KATHLEEN BRUCE

Kathleen Bruce, a member of the A. H. S. since 1928 and a life member since 1936, died at Richmond, Virginia, on April 26, 1950. She contributed two articles to *Agricultural History*, namely "Materials for Virginia Agricultural History," 4: 10–14 (1930), and "Virginian Agricultural Decline to 1860: A Fallacy," 6: 3–13 (1932), and was a member of the journal's editorial board from 1932 onward. She was an elected member of the executive committee during 1934–35 and 40–41. She also served on nominating and program committees from time to time. She was a graduate of Radcliffe College (A.B., 1919; A.M., 1919; and Ph.D., 1924). She had taught at Wheaton College in Massachusetts, the College of William and Mary, Hollins College, and Tulane University. She did special research for the Museum of Science and Industry in Chicago and for the McCormick Genealogical Association and was State supervisor of the Historical Records Survey in Virginia. She will long be known in historical circles for her monograph on *Virginia Iron Manufacture in the Slave Era* (1930).

### RECENT DEATHS

Oliver Edwin Baker, known throughout the world for his work in the fields of geography, economics, and demography, died on December 2, 1949, at his home in College Park, Maryland. His service with the U. S. Department of Agriculture extended from 1912 to 1942, when he joined the faculty at the University of Maryland. He was a charter member of the A. H. S.

Isaiah Bowman, president emeritus of Johns Hopkins University and one of the world's leading geographers, died in Baltimore, Maryland, on January 6, 1950. He had been a member of the A. H. S. since 1944. The *New York Times* and the *Washington Post* for January 7, included extended statements about his lifework.

Richard J. Purcell, professor of history at Catholic University of America for twenty-nine years, died suddenly at his home in Washington, D. C., on January 3, 1950. For a note on his activities in the field of history see the *American Historical Review*, 55: 781–782 (April 1950).

### DATA ON AMERICAN RANCHING IN MEXICO WANTED

Mrs. Dorothy Embry Cross of 1902 Palo Alto Way, Menlo Park, California, is interested in contacting anyone with first-hand knowledge of the American expansion into southern Vera Cruz between the years 1893 and 1905. Particular information is sought regarding the ranches, San Miguel Temoloapa, southwest of Coaltzacoacos, and Esperanza, on the Uspanapa River. The ranches were bought by the four sons of Talton Embry of Madison County, Kentucky, in 1895–96. Earlier interests of cattlemen in Cuba and Gulf stockyards would be pertinent to this expansion. Agricultural operating companies associated with fruit, sugar cane, and rubber would be relevant.

### THE AGRICULTURAL SOCIETY OF SOUTH CAROLINA

The handsome volume by Chalmers S. Murray entitled *This Our Land: The Story of the Agricultural Society of South Carolina* (Charleston, Carolina Art Association, 1949, 290 p., $5.00) was evidently designed for the home folks. It will make a very fine addition to the usual array of "interesting books" which ancestor worshippers are wont to leave in places of prominence on the tables of their reading, study, and drawing rooms. It is "gotten up" in the grand tradition: fine binding, block-print illustrations, large print, and a copy of the current membership roll of the society. It is not cluttered up with many of the trappings of scholarship: no table of contents, no index, and almost no footnotes. A short bibliography of some thirty-eight items is included, and occasionally the author also interrupts the flow of his story to cite a few standard references; but in general chronology marches remorselessly on from foundation date (August 24, 1785) to World War II. Based on the list of acknowledgments and the modest bibliography, it would seem that all research connected with the publication was carried on solely in records available in Charleston, the site of America's most glorious and persistent city-state. There is no evidence of consultation of the collection of source materials on South Carolina agriculture which has been accumulated in the library of Clemson College. Likewise, the library and research facilities as well as the publications of the United States Department of Agriculture seem to have been by-passed.

In spite of the shortcomings of the study and the extensive space devoted to the social activities of the society's members, serious students of American agriculture may still find the volume of some value. Strewn at random through the comments on banquets, family trees, and personal privations due to military invasion, one can find some highly significant data on the activities of one of the oldest and finest regional societies in our history. These include entries describing the society's premium-prize program, its "cattle" shows, its experimental farms, and its extensive correspondence contacts with the progress of scientific agriculture the world around. By indirection the reader becomes aware of the dominant role of the society in developing crops, techniques, and markets for the agricultural life of much of the State. Especially fine is the evidence of the

staunch qualities of the agricultural leaders of the State and of their ability to adjust to and overcome such disasters as hurricanes, soil depletion, northern exploitation and competition, and violent changes in labor supply, and still maintain the vitality of the society and of agriculture in South Carolina.

It is to be hoped that someday a competent scholar will rework this material and produce a definitive study of this truly remarkable organization. Such a study will perforce have to fit the society into the general framework of developments in American economic life. It would also have to point up more thoroughly the effect of this society on all agricultural activity in South Carolina throughout the years. It is not impossible that the area of influence may have to be expanded to include the entire southeastern plantation and farm area, especially in the years before 1860.—*Albert V. House, Harpur College, State University of New York.*

### PLANT INTRODUCTION BY THE U. S. GOVERNMENT

Nelson Klose, in *America's Crop Heritage: The History of Foreign Plant Introduction by the Federal Government* (Ames, Iowa State College Press, 1950, 156 p., $3.50), traces the plant introduction activities of the Federal Government from their beginnings to the present. This is the first book to be published on the history of these activities, although parts of the story have been told in memoirs, agricultural and economic histories, periodical articles, and other publications. The opening chapter summarizes plant introductions in colonial America. The second chapter is concerned with the contributions of agricultural societies and such statesmen as Benjamin Franklin, George Washington, and Thomas Jefferson. The following seven chapters cover the activities during the nineteenth century, while the last chapter lists some of the achievements of the twentieth century. The foreword and photographs by David G. Fairchild add to the interest of the book.

The emphasis given to the nineteenth century is understandable, for, as the author shows, the first activities by the Federal Government began early in the century and the trend toward federalization of plant introduction work culminated in 1898 in the organization of the Office of Seed and Plant Introduction in the Department of Agriculture. The Federal Government, during the century, was largely or entirely responsible for the introduction and promotion of sorghums, durum wheat, Egyptian cotton, the Bahia navel orange, Japanese persimmons, dates, lespedeza, and other crops and improved crop varieties.

The volume is intended primarily for the general reader and should give him some idea of the origin of familiar agricultural products. While it might serve for supplemental reading in courses in agricultural or economic history, a number of factual errors limit its usefulness in this respect. Thus, the early history of alfalfa could hardly be "confused with that of lucerne" since the two were identical; Henry L. Ellsworth, not Oliver Ellsworth, served as head of the Patent Office; when the Bureau of Plant Industry was organized, it was not "devoted exclusively to plant introduction"; and cinchona, as the author shows elsewhere, was not discovered in 1852 in Peru. Such errors, however, should not obscure the fact that the author has made a definite contribution to agricultural history.—Wayne D. Rasmussen.

### KEY CITY OF THE CENTRAL GRASSLAND

James C. Malin's *Grassland Historical Studies: Natural Resources Utilization in a Background of Science and Technology: Volume 1, Geography and Geology* (Lawrence, Kansas, Printed by the author, 1541 University Drive, 1950, 377 p., $2.50) is an able demonstration of the author's principle that the history of an earth area involves all of its relations. In part 1, the over-all theme is wood and minerals for fuel and building material. The world-wide significance of this subject is discussed, and the knowledge of the natural resources of Kansas and Nebraska actually available to prospective emigrants in 1854 is summarized.

Part 2 is a case study of the geography and history of the settlement that became Kansas City, Missouri, from its beginnings to 1876. The consideration of the geography of the Missouri River Elbow region and the chapter on the development of the livestock market and the grain trade are of special interest to agricultural historians. Of greater importance to them, however, is the book's clear and broad delineation of the Central Grassland of North America.—Everett E. Edwards.

### ACTIVITIES OF MEMBERS

Harold E. and Ernestine Briggs of Southern Illinois Normal University are the authors of "The Theatre in Early Kansas City" in *Mid-America*, 32: 89–103 (April 1950).

Louis G. Connor, author of "A Brief History of the Sheep Industry in the United States" in the Agricultural History Society's *Papers*, 1: 93–197 (1921), has retired from the U. S. Tariff Commission.

Mrs. LaWanda F. Cox of Hunter College spent part of the summer in Washington, D. C., doing research on the history of agricultural labor and the Freedmen's Bureau.

The paper by Richard O. Cummings on "Historical Influences and Technical Collaboration in Agriculture," presented at the Inter-American Conference on Conservation of Renewable Natural Resources, Denver, Colo., on Sept. 13, 1948, has been printed by the U. S. Department of State in the *Proceedings* of the conference.